Fourteenth Annual Report

of the

Corporation, Board of Managers

of the

Rhode Island College of Agriculture and Mechanic Arts,

made to the

General Assembly at its January Session, 1902.

Part I.

Part II — Experiment Station Report — is printed under separate cover.

Providence, R. I.
E. L. Freeman & Sons.... Printers to the State.
1902.

Rhode Island College of Agriculture and Mechanic Arts.

Corporation.

HON. MELVILLE BULL.....NEWPORT COUNTY.
HON. C. H. COGGESHALL .....BRISTOL COUNTY.
HON. HENRY L. GREENE.....KENT COUNTY.
HON. BENJAMIN A. JACKSON.....PROVIDENCE COUNTY.
HON. J. V. B. WATSON.....WASHINGTON COUNTY.

Officers of the Corporation.

HON. HENRY L. GREENE, President.....P. O., RIVERPOINT, R. I.
HON. C. H. COGGESHALL, Clerk.....P. O., BRISTOL, R. I.
HON. MELVILLE BULL, Treasurer.....P. O., NEWPORT, R. I.

Report.

To His Excellency Charles Dean Kimball, Governor, and the Honorable General Assembly of the State of Rhode Island and Providence Plantations, at its January Session, 1902 :

I have the honor to submit herewith the Fourteenth Annual Report of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, as required by law.

HENRY L. GREENE,

President of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts.

Faculty and Assistants.

JOHN HOSEA WASHBURN, PH. D.,

PRESIDENT,

Professor of Agricultural Chemistry and Physiography.

B. S., Massachusetts Agricultural College, 1878; Graduate student, Massachusetts Agricultural College, 1881-1883; Professor of Chemistry, Storrs Agricultural School, 1883-1887; Student in Göttingen University, 1885 and 1887-1889; Ph. D., Göttingen, 1889; Appointed President, 1890.

HOMER JAY WHEELER, PH. D.,

Professor of Geology,

B. S., Massachusetts Agricultural College, 1883; Assistant Chemist, Massachusetts State Experiment Station, 1883-1887; Graduate student, University of Göttingen, 1887-1889; Ph. D., Göttingen, 1889; Appointed Chemist of Rhode Island Agricultural Experiment Station and Professor of Geology, 1890.

E. JOSEPHINE WATSON, A. M.,

Professor of Languages,

A. B., Smith College, 1882; A. M., Cornell University, 1883; Assistant in English, Smith College, 1883-1887; Student of North European Languages in Göttingen, 1887-1889; Appointed Professor of Languages, September, 1892; Student of French in Tours, summer of 1895.

WILLIAM ELISHA DRAKE, B. S.,

Professor of Mechanical Engineering,

B. S., Polytechnic Institute, Worcester, 1886; Instructor in Physics and Electricity, Worcester Polytechnic Institute, 1887; Instructor in Woodworking at Pratt Institute, Brooklyn, 1887-1893; Appointed Professor of Mechanical Engineering, 1893.

HARRIET LATHROP MERROW, A. M.,

Professor of Botany,

B. S., Wellesley College, 1886; Teacher of Science, Plymouth (Mass.) High School, 1887-1888; Teacher of Science, Harcourt Place, Gambier, O., 1888-1891; Graduate student, University of Michigan, 1891-1892; A. M., Wellesley College, 1893; Graduate assistant, Botanical Laboratory, University of Michigan, 1893-1894; Appointed Professor of Botany, January, 1895.

All salaries of members of the faculty are paid from United States funds.

FRED WALLACE CARD, M. S.,

Professor of Horticulture, and Acting Professor of Agriculture,

B. S., Cornell University, 1892; M. S., Cornell University, 1893; Assistant Horticulturist, Cornell University Experiment Station, 1893; Associate Professor of Horticulture, University of Nebraska, 1893-1898; Appointed Professor of Horticulture, 1898.

COOPER CURTICE, D. V. S., M. D.,

Professor of Animal Industry,

B. S., Cornell University, 1881; D. V. S., Columbia Veterinary College, N. Y., 1883; M. D., Columbian University, Washington, D. C., 1887; Assistant Paleozoic Paleontologist, U. S. Geological Survey, 1883-1886; Specialist, Department of Agriculture, Washington, D. C., 1886-1892; Veterinarian, State Board of Health, N. Y., 1892-1894; Tuberculosis Specialist, U. S. Department of Agriculture, Washington, D. C., 1895-1896; Professor of Zoölogy, North Carolina College of Agriculture and Mechanic Arts, 1898; State Veterinarian, North Carolina, 1899; Appointed Professor of Zoölogy, 1900; Professor of Animal Industry, 1902.

*ARTHUR CURTIS SCOTT, B. S.,

Professor of Physics,

B. S., R. I. College of Agriculture and Mechanic Arts, 1895; Appointed Instructor in Physics, 1895; Appointed Professor of Physics, 1897.

SOLOMON E. SPARROW,

CAPTAIN, UNITED STATES ARMY.

Professor of Military Science and Tactics,

Graduate of West Point, 1878; Detailed Professor of Military Science and Tactics, 1900.

LAURENCE ILSLEY HEWES, PH. D.,

Professor of Mathematics,

B. S., Dartmouth, 1898; With Engineering Department, Massachusetts Highway Commission, seasons of 1897-1899; Assistant Engineer, G. R. & I. Street Railway, Essex Co., Mass., 1899, Inspector of Macadam Road Construction, Brookline, Mass., 1900; Ph. D., Yale University; 1901; Appointed Professor of Mathematics, 1901.

VIRGIL LOUIS LEIGHTON, PH. D.,

Associate Professor of Chemistry,

A. B., Tufts College, 1894; A. M., Kansas State University, 1895; Ph. D., Tufts College, 1897; Instructor in Organic Chemistry, Tufts College, 1897-1901; Appointed Associate Professor of Chemistry, 1901.

All salaries of members of the faculty are paid from United States funds.

**Absent for the year September, 1901, to September, 1902.*

JOHN BARLOW, A. M.,

Professor of Zoölogy,

B. S., Middlebury, 1895; A. M., Brown University, 1895; Assistant Biologist, R. I. Experiment Station, 1898; Professor of Biology, Fairmount College, 1898-1901; Appointed Professor of Zoölogy, 1901.

ALBERT AUGUSTUS RADTKE, B. S.,

Acting Professor of Physics,

B. S., University of Wisconsin, 1900; Appointed Instructor in Physics, 1900; Acting Professor of Physics, 1901-1902.

THOMAS CARROLL RODMAN,

Instructor in Woodwork,

Appointed, 1890.

MABEL DEWITT ELDRED, B. S.,

Instructor in Drawing,

B. S., R. I. College of Agriculture and Mechanic Arts, 1895; Appointed Instructor in Drawing, 1897.

ELIZABETH WATSON KENYON, A. M.,

Instructor in Languages and History,

B. S., Mt. Holyoke College, 1896; A. M., Brown University, 1897; Instructor in English and History, Middleborough (Mass.) High School, 1898-1900; Appointed Instructor in Languages, 1900.

SARAH WATSON SANDERSON, B. L.,

Instructor in Languages,

B. L., Smith College, 1900; Appointed Instructor in Languages, 1900.

HOWARD BURDICK, B. S.,

Instructor in Agriculture and Farm Superintendent,

B. S., R. I. College of Agriculture and Mechanic Arts, 1895; Appointed Assistant in Agriculture, 1897; Appointed Instructor in Agriculture and Farm Superintendent, 1900.

MARSHALL HENRY TYLER, B. S.,

Instructor in Surveying, and Master of the Preparatory Department,

B. S., Amherst College, 1897; Instructor at St. Mark's, 1897-1898; Appointed Master of the Preparatory Department, 1898.

All salaries of members of the faculty are paid from United States funds.

LUCY HELEN GAGE, A. B.,

Instructor in Stenography and Typewriting,

A. B., Tufts College, 1899; Graduate of Chandler Normal Shorthand School, 1900; Appointed Instructor in Stenography and Typewriting, 1900.

CAPTAIN TIBERIO GARCIA ALOMÁ,

Assistant Instructor in Spanish.

JOHN FRANKLIN KNOWLES, B. S.,

Assistant in Woodwork.

GEORGE BURLEIGH KNIGHT,

Assistant in Ironwork.

LILLIAN MABELLE GEORGE, B. S.,

Assistant in English, and Librarian.

CARROLL KNOWLES, B. S.,

Assistant in Mechanics.

NATHANIEL HELME,

Meteorologist.

Non-resident Demonstrators and Lecturers for the current year.

ANNA BARROWS, Editor "American Kitchen Magazine," Boston, Mass. Subject: "Cooking Poultry and Eggs."

E. F. BARRY, Machias, Maine. Subject: "Pigeons."

GEORGE M. CLARK, Higganum, Conn. Subject: "Grass Culture."

J. F. CRANGLE, Supt. Valley Farms, Simsbury, Conn. Subject: "Turkeys and Pheasants."

I. K. FELCH, Natick, Mass. Subject: "Standard, Scoring, and Judging," with demonstrations.

GEORGE W. FELTON, Cliftondale, Mass. Subject: "Belgian Hares."

All salaries of members of the faculty are paid from United States funds.

FRANK W. GAYLOR, Melville Station, Newport, R. I. Subject: "Construction of the Brooder House."

J. H. HALE, South Glastonbury, Conn. Subject: "Peach Culture."

HENRY HALES, Ridgewood, N. J. Subject: "Origin and Development of Fowls."

D. J. LAMBERT, Plymouth Rock Farm, Cowesett, R. I. Subject: "How to Begin in the Poultry Business."

W. D. RUDD (W. H. Rudd, Son & Co.), Boston, Mass. Subject: "Needs of the Market."

F. W. MURPHY (W. H. Rudd, Son & Co.), Boston, Mass. Demonstration: Preparing Fowls for Market.

HORACE MINER, Westerly, R. I. Subject: "Geese."

GEORGE H. POLLARD, Thomas Lawson Farm, Egypt, Mass. Subject: "Ducks."

FRANKLANE L. SEWELL, Artist for "Reliable Poultry Journal," Chicago, Ill. Subject: "Types of Birds."

FRANK H. STADTMUELLER, Supt. C. E. Beach's Farm, West Hartford, Conn. Subject: "Farm Economics and Farm Management."

A. A. SMITH, Woonsocket, R. I. Subject: "The Dairy Cow."

GEORGE D. SPRAGUE, Chapinville, Conn. Subject: "Experiences of a Farm Manager."

E. COLLINS TEFFT, Wakefield, R. I. Subject: "Poultry Buildings, Mating and Rearing Chickens."

H. A. NOURSE, Supt. Fisher's Island, New York. Subject: "Preparing Fowls for Exhibition."

THOS. H. TAYLOR, JR., Supt. Poultry Dept., Briarcliff Farms, Briarcliff Manor, New York. Subject: "Broilers, and Daily Operations on a Large Plant."

J. H. ROBINSON, Editor "Farm Poultry," Boston, Mass. Subject: "Value of Advertising to the Poultryman."

EDWIN C. POWELL, Assistant Editor "N.E. Homestead," Springfield, Mass. Subject: "Co-operation in Poultry-work."

CHAS. O. FLAGG, Farm Supt., Hardwick, Mass. Subject: "Dairying, with Poultry Plant."

H. W. CONN, Ph.D., Wesleyan University, Middletown, Conn. Subject: "Bacterial Diseases of Animals."

JAMES E. RICE, New York State Farmers' Institute Bureau, New York. Subject: "Brooding, Winter Egg Production, and Plans."

THOMAS WRIGHT, South Sudbury, Mass. Subject: "Pigeons."

College Calendar.

1902.

Winter Term.

January 6, 10 A. M.....Examination of Conditioned Students.

January 6, 1 P. M.....Term begins.

January 30.....Day of Prayer for Colleges.

February 22.....Washington's Birthday.

April 1, 12 M.....Term ends.

Spring Term.

April 8, 10 A. M.....Examination of Conditioned Students.

April 8, 1 P. M.....Term begins.

May 9.....Arbor Day.

May 30.....Memorial Day.

June 15.....Baccalaureate Sunday.

June 16.....Reading of Cincinnati Orations for Lippitt Prize.

June 17.....Commencement.

June 20, 9 A. M....Entrance Examinations for College and Preparatory School, given at the College, and the State Normal School, Providence.

Fall Term.

August 29, 9 A. M. ..... Entrance Examinations at the College.

September 16, 9 A. M. ..... Entrance Examinations at the College.

September 16, 10 A. M. ..... Examination of Conditioned Students.

September 17, 1 P. M. ..... Term begins.

November 4. ..... Election Day.

———— ..... Thanksgiving Day.

December 23, 12 M. ..... Term ends.

1903.

Winter Term.

January 6, 9 A. M. ..... Examination of Conditioned Students.

January 6, 1 P. M. ..... Term begins.

Experiment Station Staff.

JOHN H. WASHBURN, Ph. D., ... President of the College.
*H. J. WHEELER, Ph. D., ... Director and Chemist.
FRED W. CARD, M. S., ... Horticulturist.
†COOPER CURTICE, D. V. S., M. D., ... Biologist.
‡BURT L. HARTWELL, M. S., ... First Assistant Chemist.
GEORGE E. ADAMS, B. S., ... Assistant in Field Experiments.
ALFRED W. BOSWORTH, B. S., ... Assistant Chemist.
NATHANIEL HELME, ... Meteorologist.
S. ALINE NYE, ... Stenographer and Accountant.
MARY G. SCHERMERHORN, ... Stenographer and Librarian.

* In charge of field experiments.
† In charge of poultry experiments.
‡ Temporarily absent, engaged in study.

The publications of the Station will be mailed free on request to anyone in Rhode Island interested in agriculture. The Station desires the co-operation of the farmers of the State in the work of investigation, and any facts of special interest concerning animal or vegetable growth or disease are solicited. Visitors are always welcome. Railroad station, telegraph, express, and post-office—Kingston, Rhode Island.



GENERAL VIEW OF CAMPUS.

The College.

History.

IN 1863 the State of Rhode Island accepted from the United States Government the land grant scrip, which gave to each State thirty thousand acres of the public lands for each Senator and Representative in Congress. The land was to be sold by the States or their agents, the proceeds arising from the sale invested, and the annual income derived therefrom was to be "inviolably appropriated by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and Mechanic Arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

On March 2, 1887, the act known as the Hatch Act was passed, appropriating $15,000 annually to each State, for the purpose of establishing an Agricultural Experiment Station in connection with an Agricultural College or School.

From the time of the acceptance by the State of Rhode Island of the land scrip in 1863, there were many people who felt that this State did not offer to young men such advantages for instruction in agriculture and mechanic arts as others afforded that had genuine agricultural and mechanical colleges. So great was the dissatisfaction among the citizens of Rhode Island at the absence

of these educational advantages, that they were determined to have the Hatch Agricultural Experiment Station located at a *bona fide* agricultural educational institution.

The Rhode Island State Agricultural School was established according to Chapter 706 of the Public Laws, passed May 23, 1888.

The United States Congress, on August 30, 1890, passed an act known as the New Morrill Bill. This appropriated for the further support of the agricultural and mechanical colleges a sum beginning with $15,000 and continuing, with a yearly increase of $1,000, until the annual appropriation should reach $25,000.

That the school already established might receive the benefit of the act of Congress, the General Assembly amended Chapter 706 of the Public Laws, incorporating the Rhode Island College of Agriculture and Mechanic Arts.

Since September, 1892, the institution has been conducted on a college basis, with an entirely new course of study.

On April 19, 1894, the Legislature passed an act authorizing the State treasurer to pay Brown University the sum of $40,000, in consideration of which the university was to turn over to the State the proceeds of the original land grant of 1862 and to withdraw from the United States Supreme Court its suit for the Morrill fund.

On January 27, 1895, the college dormitory was destroyed by fire; but it was replaced by a new granite building, which was ready for use the first of October of the same year, and was called Davis Hall.

At the January session of the Legislature, 1897, the institution was given an appropriation for a stone building, one hundred and thirty feet by forty feet, practically three stories high. The basement has three rooms used for instruction in photography and physics, and a large room devoted to electrical engineering. On the second floor are recitation-rooms, chapel, library and reading-room, and young women's study-room. The third floor contains a large hall for drill and gymnasium purposes, above which are bath-rooms and lockers. The hall is also used for assemblies

whenever larger audiences are expected than the chapel can accommodate. This building is called Lippitt Hall.

Since then an excellent dairy barn has given the agricultural department increased facilities for instruction.

On May 8, 1901, the Board of Managers established a school of mines, to be connected with the school of mechanical and electrical engineering. The courses of instruction for the Freshman and Sophomore years of this school have already been arranged, and are identical with the courses given in the mechanical and electrical engineering school. The courses for the Junior and Senior years will be made ready for publication as soon as sufficient funds are at hand to put them into effect.

CHANGES IN THE FACULTY.—Anne L. Bosworth, Ph.D., who had been professor of mathematics since the establishment of the department in 1892, sent in her resignation, to go into effect in June of this college year. It is with regret that the institution loses Miss Bosworth from the faculty. Her conscientious work has been, from the beginning, highly appreciated by every member of the institution. Laurence I. Hewes, Ph.D. (Yale), was appointed professor of mathematics to succeed her. A. C. Scott, B. S., professor of physics, was granted a year's absence for study, and his place has been filled by A. A. Radtke, B. S. At the close of the June session, J. E. Bucher, Ph. D., resigned as associate professor of chemistry, to accept the position of associate professor of chemistry at Brown University. His place has been filled by the appointment of Virgil L. Leighton, Ph. D. (Tufts). A. A. Brigham, Ph. D., resigned as professor of agriculture, to accept a position with the Cornell Incubator Mfg. Co., and Professor F. W. Card was appointed acting professor of agriculture. Mr. Joseph A. Tillinghast, who had been connected with the experiment station for a number of years, and who had done most efficient work in that department, was appointed instructor in agriculture in October. Shortly after his appointment he was taken ill with typhoid fever, and died November 21, 1901. His death takes from the in-

stitution one who has been noted for his loyal, conscientious work. All feel the personal loss of his friendship. Upon his death, Cooper Curtice, M. D., D. V. S., professor of zoölogy, was appointed professor of animal industry, thus leaving a vacancy which was filled by the appointment of John Barlow, A. M.

Object of the Institution.

The Rhode Island College of Agriculture and Mechanic Arts is an integral part of the school system of the State. Young men and young women from the high schools are admitted to the privileges of the institution without charge for tuition. The object of the college is to prepare young people to take active part in the agricultural, manufacturing, and commercial development of the State. To this end, technical instruction in the sciences and mechanic arts is the fundamental work of the institution. In order that specialization may not be premature, technical instruction in the various courses is accompanied by instruction in languages, history, political science, and mathematics.

There are six courses leading to the degree of Bachelor of Science: agriculture, mechanical engineering, electrical engineering, chemistry, biology, and general science. All regular students take the same course through the Freshman year. With the opening of the Sophomore year the engineering students begin to follow a somewhat different line of work from that taken by students in the scientific courses. Not until the Junior year is choice made of the particular course in which the student hopes to take a degree.

The aim of the agricultural course is to fit students not only for practical agriculture but for positions in experiment stations, and as teachers. To this end thorough instruction is given in science and the application of its principles to agriculture, supplemented by a general training in mathematics and languages. The mechanical course is intended for those wishing to become mechanical engineers, as the electrical course is designed to train electrical

engineers. The chemical course offers several special lines of work. A student may prepare himself to become a general chemist or a teacher; may specialize in agricultural chemistry with a view to experiment-station work; or may elect industrial chemistry with the idea of obtaining a position in a factory, dyeing establishment, or along other technical lines. In the course in biology the student may take his major work in animal or in plant biology. The course offers special inducements as a preparation for the medical or veterinary school. It is likewise adapted to fit one to become a teacher, an assistant in an experiment station, or to take a government position in some biological line of work. The general science course, as the name implies, is not so special as the other courses. It offers a number of electives in history, the modern languages, and art. It is designed for those who wish a good general education in preparation for any line of life-work which they may follow. In the Senior year every student is required to prepare a thesis or report on some subject connected with the work of the course which he has chosen.

Preparatory School.

Young men and young women who have had no opportunity to receive high school instruction may enter this department to prepare for the college.

For entrance requirements, see pages 72–73.

Special Courses.

Whenever possible, students are urged to enter one of the courses leading to a degree. The arrangement of these courses is the result of careful thought and long experience as to the best combination of studies to fit one for the various occupations in which a technical education is required; and it is believed that no such thorough preparation can be obtained from special courses selected by the student.

However, any courses described in this catalogue may be taken

by special students of maturity, who can satisfy the professor in charge of the subject chosen that they are prepared to derive benefit from such work.

Special Students in Agriculture.

Students having a working knowledge of the English branches may enter the college without examination and take those subjects which will prove of most direct benefit to them in the work of the farm. One or two years can thus be spent with excellent results. A certificate will be granted at the end of the time, showing the work covered. Such a course would consist of the study of agricultural soils, drainage, agricultural implements and apparatus, farm fertility and its maintenance, field-crops, breeds of farm animals, stock-breeding, feeding of farm animals, dairy-husbandry, poultry-raising, farm-accounts, the principles of horticulture, fruit-growing, vegetable-gardening, landscape-gardening, physiology, entomology, bench-work, wood-turning, and forging. Suitable courses in botany are also available to those having sufficient training or experience to enable them to take such courses with profit. In connection with the above, other subjects for which the student is fitted may be taken. The study of English should be included in most cases.

A special course in farm practice, continuing six weeks, is offered before the Christmas holidays. A special course in poultry-keeping, also continuing six weeks, follows the Christmas vacation. Payment of tuition fees for those outside the State and board for the full time is required in advance of students registering in the special courses. Those interested in these courses will please send for circulars giving a full description of them. Address the president.

Requiremenst for Admission to the College, 1902.

Graduates from high schools, and other schools of similar grade, are admitted without examination, on certificates which are filled

out by their principals. The candidate must apply to the college for the certificate, giving the address of his principal who is to certify him. The college will correspond with the principal, furnishing blanks for him to fill. Graduates from high schools are not admitted on diploma.

Candidates not entering the Freshman class on certificate will be examined in arithmetic; algebra; plane geometry; English grammar; advanced English; one year of German, French or Latin.

In the arithmetic examination especial attention will be paid to fractions, the metric system, simple and compound proportion, and square and cube root; thorough drill in mental arithmetic will be necessary. The applicant should have mastered all of Wells's Academic or Wentworth's School Algebra, and Wells's Plane Geometry, or their equivalents.

The English requirements are those prescribed for entrance to the New England colleges. The student will be expected to show familiarity with the works named below. These are divided into two classes. Those marked (*a*) are to be read, and the candidate will be required to show a general knowledge of their subject-matter and of the lives of the authors. Those marked (*b*) are to be thoroughly studied, so that the candidate will be able to pass an examination upon their subject-matter and structure. To be acceptable, the candidate's paper must show a good knowledge of spelling, capitalization, punctuation, sentence and paragraph structure. The books prescribed for 1902 are the following: (*a*) Addison's The Sir Roger de Coverley Papers; Coleridge's The Ancient Mariner; Cooper's The Last of the Mohicans; Eliot's Silas Marner; Goldsmith's The Vicar of Wakefield; Lowell's The Vision of Sir Launfal; Pope's Iliad, books I, VI, XXII, XXIV; Scott's Ivanhoe; Shakespeare's The Merchant of Venice; Tennyson's The Princess. (*b*) Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Shakespeare's Macbeth. For 1903: (*a*) Addison's The Sir Roger de Coverley Papers; Carlyle's Essay on Burns; Coleridge's The Ancient

Mariner; Eliot's Silas Marner; Goldsmith's The Vicar of Wakefield; Lowell's The Vision of Sir Launfal; Scott's Ivanhoe; Shakespeare's The Merchant of Venice, and Julius Cæsar; Tennyson's The Princess. (*b*) Same as 1902. For 1904: (*a*) Same as 1903. (*b*) Same as 1903. For 1905: (*a*) Same as 1903. (*b*) Same as 1903. The language requirements cover one year's work in either French, German or Latin; and Latin is recommended. In French and German, this requirement comprises the essentials of grammar, easy reading and elementary composition. In Latin, the candidate must be prepared to study Cæsar. The following textbooks are recommended: Chardenal's Complete French Course, Lyon and De Larpent's Primary French Translation Book; the Joynes-Meissner German Grammar, Part I, or Collar's Shorter Eysenbach, Guerber's Märchen und Erzählungen, Part I; Collar and Daniel's First Latin Book, or Lindsay and Rollins's Easy Latin Lessons.

Admission to Advanced Standing.

Candidates may enter any of the higher classes for which they are prepared.

Opportunities Offered to Women.

The courses of instruction are open to men and women alike. The women's dormitory will accommodate a limited number of students, and the college will on application find boarding-places for others in private families in town. Special waiting and study-rooms are provided for the women who are day students.

Expenses for Women.

Room-rent is free. Fuel and lights are supplied at cost. Rooms are provided with necessary furniture, including mattresses, but no other bedding material. Other expenses are as given below. The women have an opportunity to do their own washing and

ironing. A Singer and a Household sewing-machine are at the disposal of all those living at the dormitory.

*Expenses.**

Tuition is free to all Rhode Island students. The regular expenses are tabulated below:

		Per year.	
		Minimum.	Maximum.
†Board, $3 per week, for 36 weeks		$108 00	$108 00
Men's Dormitory.	Room-rent, $3 per term	9 00	9 00
	Lights, $1 to $3 per term	3 00	9 00
	Fuel, spring and fall terms, each $3; winter term, $6	12 00	12 00
Books		15 00	30 00
Washing, 30c. to 60c. per week		10 80	21 60
Uniform for military drill, $15		7 50	30 00
Reading-room tax, 25c. per term		75	75
General expense, for damage in building, etc., 50c. per term		1 50	1 50
Laboratory fees, $2 to $10 per term		6 00	30 00
		$173 55	$251 85

The amount of laboratory fees depends upon the laboratory work taken each term. One dollar per term is charged for each of the following: botanical, zoölogical, and physical laboratories; carpenter shop; wood-turning, forge shop, machine shop, and wood-carving. This pays for the material ordinarily used in class work and for the wear and care of tools and apparatus. Any person who breaks apparatus or tools, through carelessness or neglect of instructions, will be charged the cost of the same. The chemical laboratory fee is three dollars per term for qualitative, quantitative, and organic laboratory work. This covers general chemicals and use of apparatus. Students are required to pay for breakage and for any chemicals they may use in making special prepara-

* For exceptions in expenses for women, see above.

† In consequence of the increased cost of living, the college reserves the right to raise the board to $3.50 per week whenever necessary.

tions for themselves. A fee of three dollars is also required in the electrical laboratory. Graduates pay the cost of diplomas, five dollars. *No diploma will be issued until the candidate has paid all term bills.* Every able-bodied male student is required to drill and to wear a uniform. The uniform must be paid for immediately on entering the college, when the students are measured for the suits. When worn only on drill and properly cared for, one uniform may last two or more years. The student may, however, wear his uniform all the time. Day students are required to deposit five dollars per term in advance. The college conveys students daily to and from the railroad station free of charge. Once at the beginning and end of each term, a team conveys trunks to and from the station. Boarding students shall pay term bills in advance, deposit fifty dollars each term, or give bond for two hundred dollars for the payment of all bills. No bond will be accepted from any member of the faculty. No reduction on board is made for less than five whole days' absence at one time, and this only when due written notice has been given. Fifteen cents extra is charged for each meal sent to a student's room, from sickness or any other cause. *All students in the men's dormitory are required to supply their own furniture and bedding.* The necessary furniture may be obtained at the college when desired. A room may be furnished for from eight to ten dollars. Iron bedsteads three feet wide are included under room-rent. The furniture, if properly kept, may be sold, when the student leaves, for one-half to three-fourths the original price. All clothing should be distinctly marked.

Self-help.

A limited amount of work about the buildings, on the farm, at the experiment station, in the laboratories, and in the college laundry, will be furnished to students who desire it and who prove industrious and trustworthy. Good students, who desire to help in paying their expenses, should be able to earn from twenty-five to one hundred dollars per year, depending upon the amount of

time they can spare from their studies. *No work is given to students who have not a fair standing in their classes.* The larger sums can be earned only by students who spend their vacations here at work. These opportunities are offered only to students who show a sense of responsibility in the performance of the duties assigned to them, and a disposition to render a fair equivalent of work for the compensation they receive. Thus far no worthy student has been compelled to leave the institution for lack of means.

The Lippitt Prize.

The Lippitt prize consists of a purse of one hundred dollars, offered through the generosity of ex-Governor Charles Warren Lippitt. This sum is divided into two prizes, the first of sixty and the second of forty dollars, which are awarded for the best written and delivered essays on the history of Rhode Island in the Revolution. These essays are of the nature of Cincinnati Orations and are read on the Monday preceding commencement. In 1901 the successful competitors were Edith L. Keefer, Oceanus, N. Y., first prize; Edna Ethel Dawley, Kenyon, R. I., second prize.

Discipline.

The discipline of the institution is in the hands of the faculty, assisted by two joint committees of faculty and students, called the Activity Committees. The committee for the direction of the young women is composed of three women of the faculty and two students; and that for the young men is composed of three men of the faculty and four students, one from each class. Entertainments and exercises which are conducted by both the men and women students are sanctioned by the conference of these joint committees. It is the duty of the committees to see that the general rules of conduct for the members of the institution are observed. Money paid for dormitory expenses will not be refunded to students dismissed from the dormitory.

Regulations of the College.

Conditions.—Section 1.—Any student absenting himself from more than ten per cent of the total number of recitations in any subject shall not be allowed to take his examination in that subject, except by special vote of the faculty, but shall be conditioned.

Section 2.—No student shall begin or drop a study without the consent of the committee on courses of study; the penalty for dropping such subject being a condition.

Section 3.—Examinations of conditioned students shall be held only on the days assigned in the college calendar. Any student who, after such examination, shall still have three or more conditions shall be obliged to withdraw from the college. Students still having not more than two conditions may take second examinations at the next regular time, and failing to pass, shall have no further opportunity to remove such conditions except by special vote of the faculty.

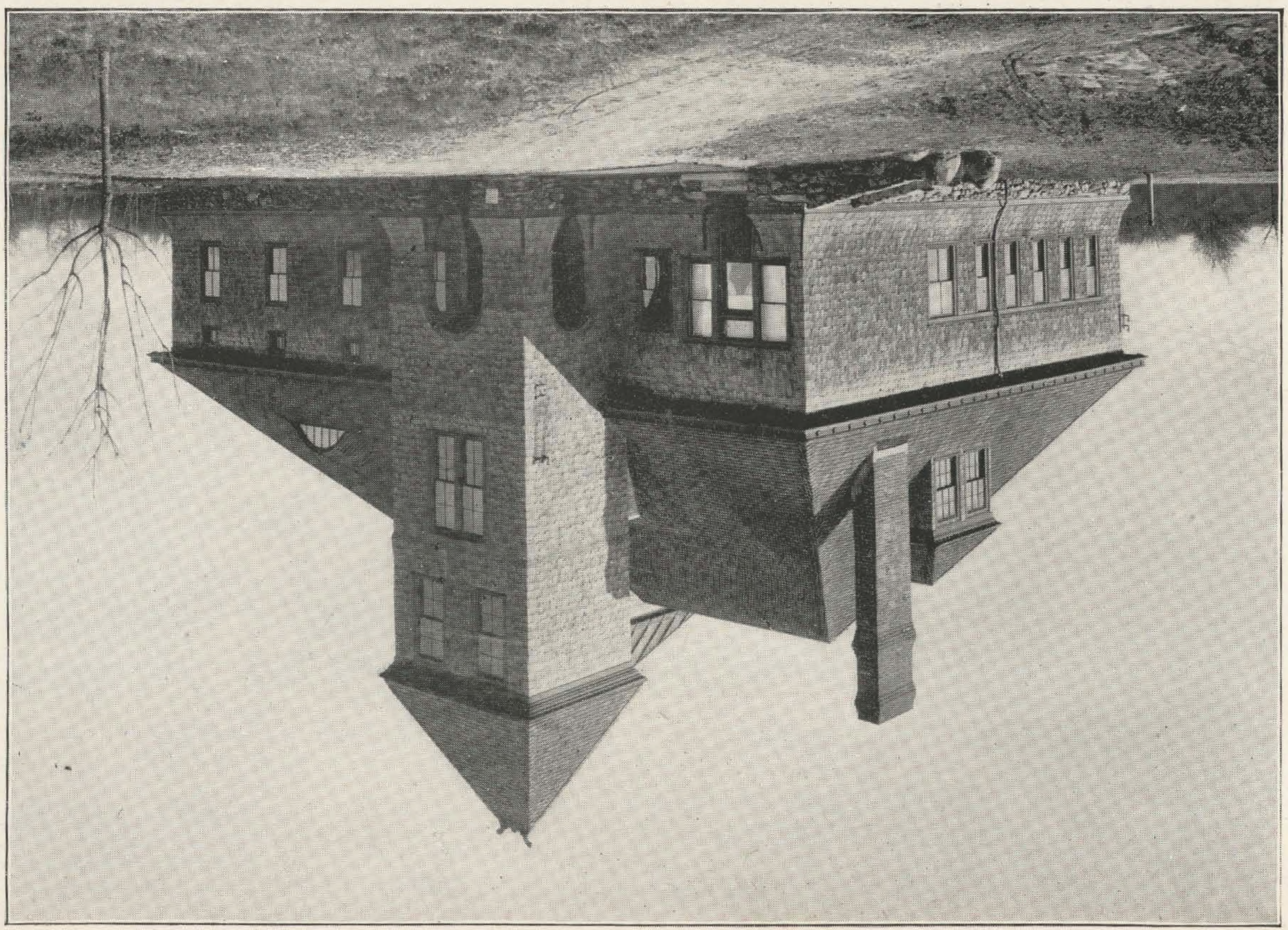
Section 4.—A student wishing to take an examination to remove a condition must make application for the same to the professor in whose department the condition was received, at least seven days before the date of the examination.

Section 5.—Students, whether regular or special, shall remove entrance conditions to both the preparatory department and the college within a year from the date of entrance, unless excused by the committee on courses of study.

Exemption from Examination.—Section 6.—Students shall be exempt from examination at the end of the term in studies in which their term averages are above eighty per cent.

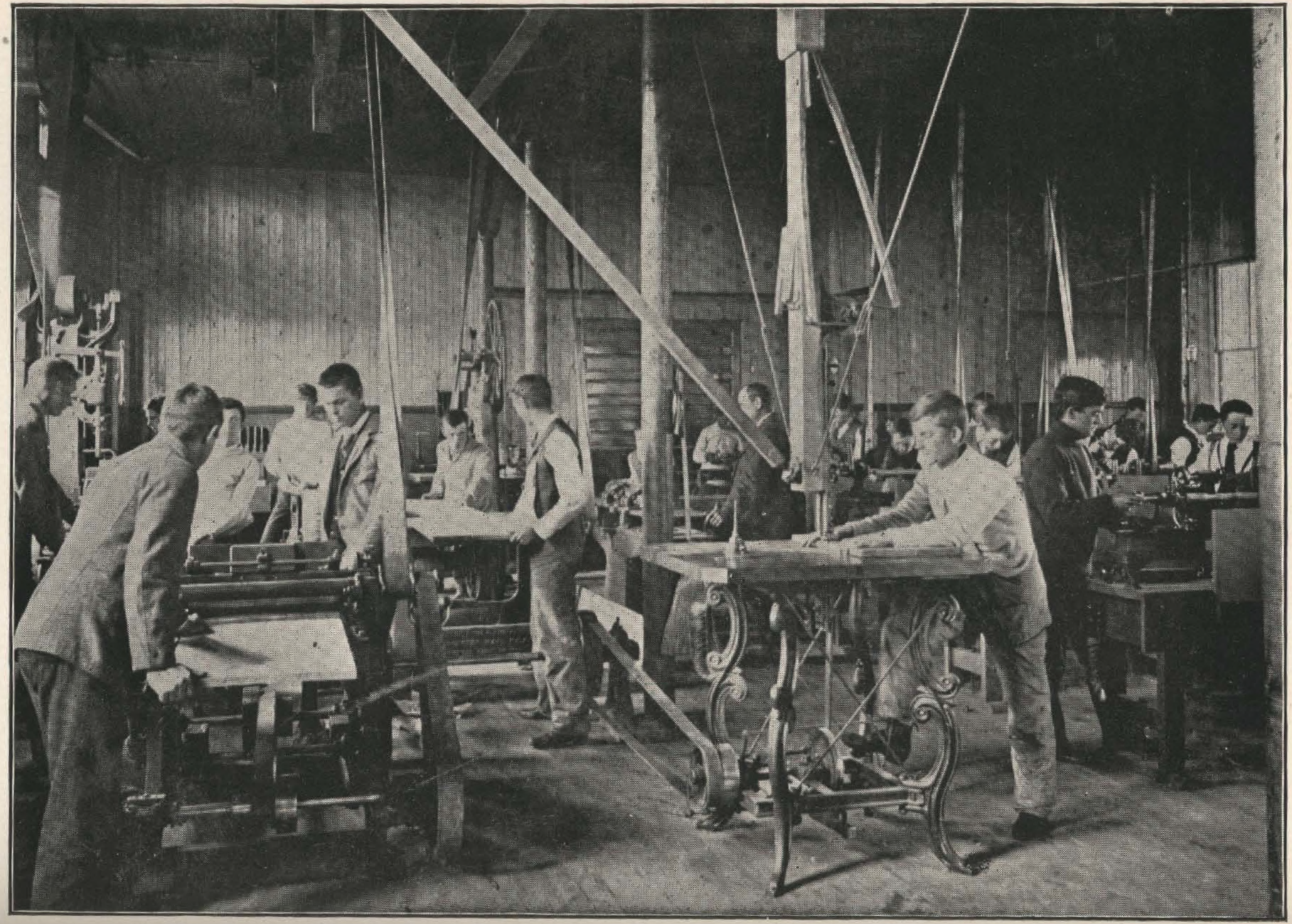
Thesis.—Section 7.—Every student who is a candidate for a degree shall prepare a thesis, and shall submit it to the president of the college at least one month before the time for granting the degree.

LADD LABORATORY.





THE CARPENTER SHOP.



THE WOOD-WORKING MACHINERY.

Student Publications.—Section 8.—No student shall publish any article in any college, class, or society publication designed for public circulation, or deliver any address on the college campus attended by persons other than students, without the consent of the president or some person appointed by him for granting such permissions.

Athletics.—Section 9.—No student shall represent the college on the athletic field, or in any other organization before the public, who is not regularly registered and in good standing; by good standing is meant conformity to all the rules of the college.

Public Worship.

The students are expected to be present at chapel exercises every morning, and on Sundays to attend some church at least once a day. Absence from chapel must be reported at the president's office for excuse on Tuesday morning of each week. A branch of the Intercollegiate Young Men's Christian Association is doing good work among the students, as is also the Young Women's Christian Union.

The Rhode Island College Lecture Association.

Faculty and students, uniting with residents of the vicinity, conduct a winter lecture course, the aim of which is to introduce talented speakers upon subjects both entertaining and instructive. The association may be looked upon as a permanent and important factor in college activities. For the season of 1901–1902, the following programme was secured:

Dec. 20.—"The English Lakes and Their Poets," Caleb Thomas Winchester, L. H. D.

Jan. 31.—"Patriotism under the New Conditions of Our National Life," Hon. Merrill Edwards Gates, LL. D., L. H. D.

Feb. 7.—"The Grandeur of the Canadian Alps," (illustrated), Prof. Charles E. Fay.

March 7.—"Thomas Carlyle," Washington Gladden, D. D.

April 18.—"Philosophy of Wit and Humor, and Stories 'Round the Stove," Melville D. Landon ("Eli Perkins").

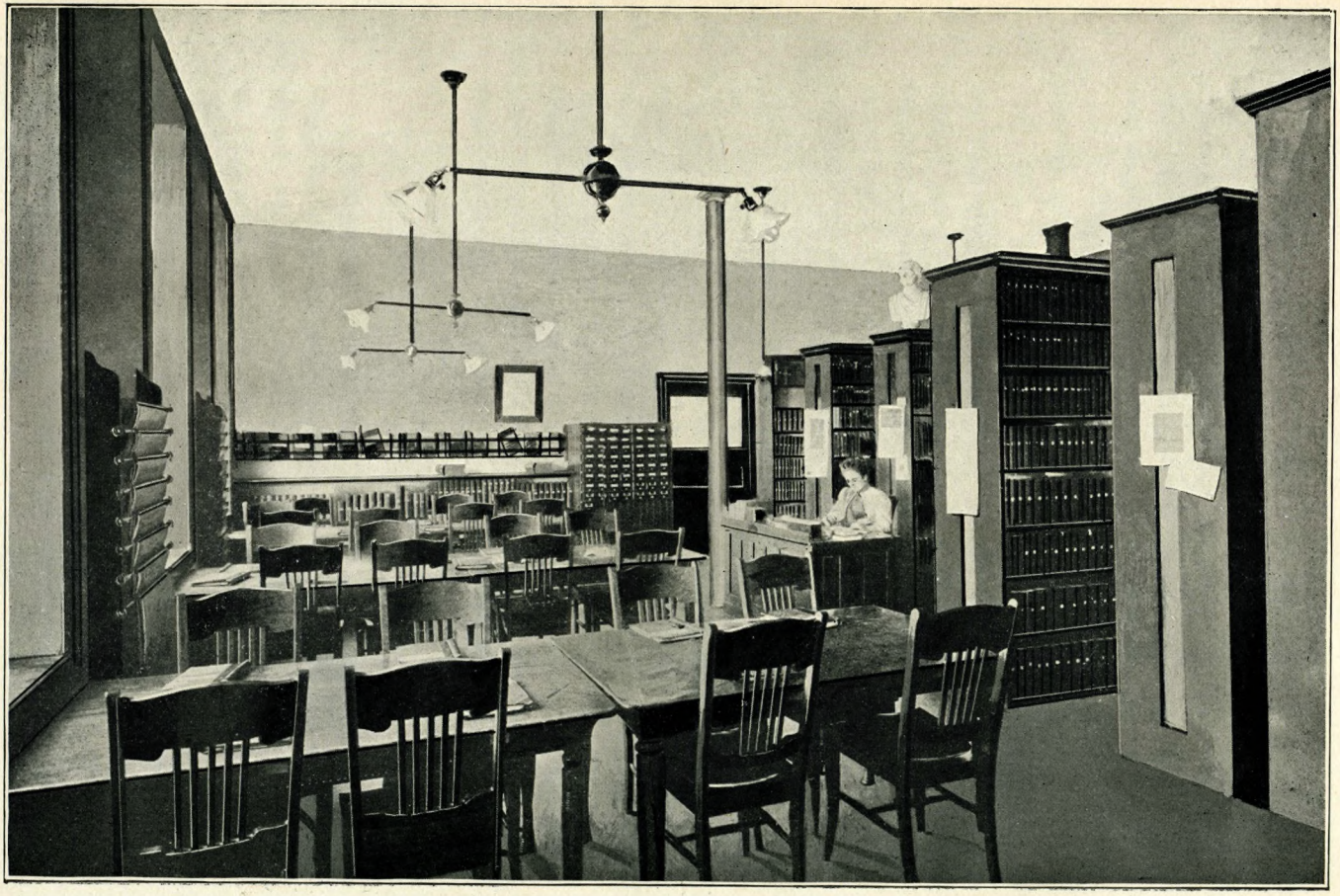
The Library.

The library occupies a large room in Lippitt Hall and numbers about ten thousand volumes. The books are arranged in stacks, to which the students have free access. The Dewey system of classification is used; and a dictionary catalogue gives author, subject, and title. As the library has been from the first intended for reference work, the various departments of instruction have made their selections with the greatest care. Combined with the library is the reading-room, where one hundred of the leading periodicals—of literary, scientific, and general interest—are on file. From time to time these are bound, and prove of great value in research work.

The library is open every week day from 7:30 A. M. to 6:00 P. M., with the exception of a half-hour at noon; on Sunday it is open in the afternoon only, from 2:30 to 6:00. The librarian or her representative is in constant attendance to aid any one in search of information. As the college is an institution designed to further the educational interests of Rhode Island, all residents of the State are urged to use its library.

Location.

The college is situated on a hillside, which furnishes it with quick drainage and a delightful view. It is less than two miles from the railroad station. A macadamized road leads from the grounds to the station, insuring at all times a good walk and drive. The railroad station is situated on the New York, New Haven & Hartford Railroad, with twenty-one trains daily, in the winter, stopping at Kingston, and more in the summer. The town is a very healthful place, five or six miles from the ocean.



THE LIBRARY.

Departments of Instruction.

Chemistry.

DR. WASHBURN, DR. LEIGHTON.

Instruction in chemistry begins with the Freshman year and consists of lectures, recitations, and laboratory work; two hours of laboratory work being counted as equivalent to one period of recitation or lecture work. The course in general chemistry extends through the second and third terms of this year; two periods per week being devoted to lectures and recitations and two periods to laboratory work during the winter term, three periods to lectures and recitations and two periods to laboratory work in the spring term. The course in qualitative analysis extends through the first and second terms of the Sophomore year, a portion of the time being given to lectures and recitations, but the greater part to practical work in the laboratory.

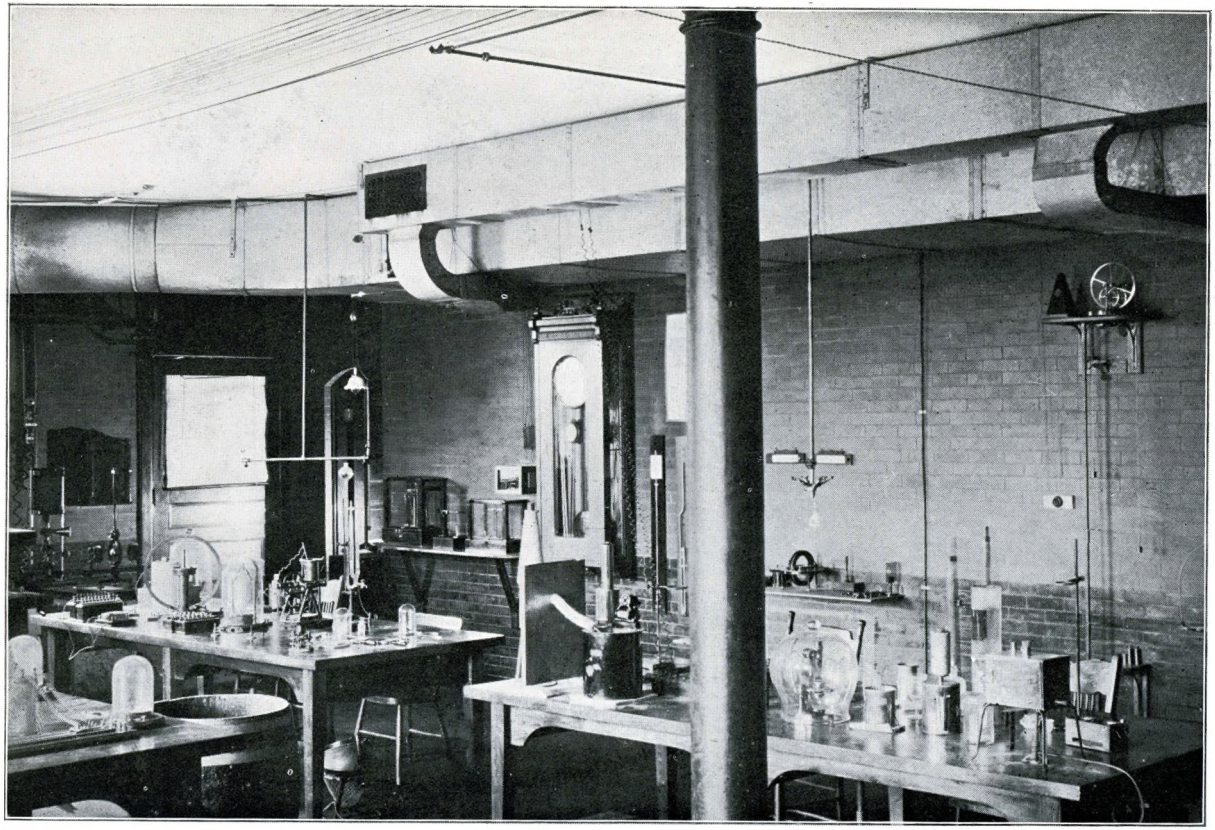
The above courses are required of all candidates for a degree, as essential to a liberal education, and are preparatory to the subsequent courses, which are designed for students desiring to make chemistry their profession, either as teachers or practical chemists. The more advanced courses furnish an excellent preliminary basis for the study of medicine, biology, or agriculture.

The subject of stoichiometry and theoretical chemistry is begun in the general chemistry and continued in the third term of the Sophomore year, much attention being given to the application of the principles to problems. The course in inorganic preparations occupies three periods per week in the first term of the Junior year. Quantitative analysis is also taken up in this term

and extends throughout the Junior year, both gravimetric and volumetric work being required. In the elementary course the simpler salts and minerals are analyzed, and in the advanced course the more complicated minerals, ores, and industrial products. Organic chemistry begins in the first term of the Junior year and extends through five terms. It includes an extended course in organic preparations. The subject of theoretical chemistry, begun in general chemistry and continued in the Sophomore year, is taken up in a much more advanced way in the first term of the Senior year, a portion of the time being devoted to laboratory work. The course also affords opportunity for work in gas analysis, mineralogy, blow-pipe analysis, assaying, sanitary chemistry, industrial chemistry, physiological chemistry, agricultural chemistry, toxicology, and textile coloring. In the Senior year, candidates for a degree in the chemical course are required to prepare a thesis on some chemical subject.

A short course in agricultural chemistry as applied especially to poultry foods, their use and digestion, is given to students in poultry-raising. A course in the chemistry of soils and fertilizers, their composition, manufacture and use, the composition and analysis of fodders and feeding-values is offered to students in the Junior year. A course in agricultural chemistry, with a study and review of bulletins and scientific papers on feeds and fodders, together with a short course in agricultural geology, is offered in the Senior year.

The laboratory is thoroughly equipped with apparatus for the above-mentioned courses, and opportunity is given for graduate students to continue work in the above lines beyond that required for a degree. Provision is also made for special students who are unable to spend the time required by the regular courses. They may take such courses as will be of most benefit to them in the line of work they intend to follow. A large number of German, French, and English chemical journals are accessible, thus affording excellent opportunity for research work.



CORNER OF PHYSICAL LABORATORY.

Physics.

PROFESSOR SCOTT, MR. RADTKE.

Instruction in physics in the college course begins with the first term of the Freshman year and consists of lectures, recitations, and laboratory work. The various branches grouped under this head are treated both mathematically and experimentally. Mechanics and heat are studied in the fall term, magnetism and electricity in the winter term, and sound and light in the spring term. The recitations are prepared chiefly from Wentworth and Hill's Text-book of Physics. The laboratory work consists of special experiments from various authors.

The study of advanced physics follows in the Sophomore year and is required throughout the year of all students in the engineering courses; and is open as an elective to all students in other courses who have completed course I or its equivalent. This course embraces a deeper and more extended discussion of heat and mechanics of fluids, in the fall term; of statics, kinetics, wave motion and sound, in the winter term; and light, electricity and magnetism, in the spring term. Hastings and Beach's General Physics is used as a text-book, supplemented by lectures.

Special instruction in photography is offered as an elective course to students who have an elementary knowledge of physics and chemistry. The course embraces lectures and recitations, together with instruction in practical methods of making negatives and photographs. A suitable photographic laboratory is provided for reproducing the appearance of tested specimens, photographs of physiographic features, microscopic structure of substances, etc., for use in the lecture-room.

A course in advanced photography is open to students who have completed the elementary course. It consists of a more extended study of the chemistry and optics of photography, and laboratory work in making bromide enlargements and lantern-slides. This is followed by the theory and use of the microscope and practical

work in photo-micrography, the manipulation of the projection microscope and the optical lantern. The department is provided with room and ample apparatus for illustrating and testing every form of light that is in use in projection work, together with the apparatus for X-ray photography with either the high frequency induction coil or electrostatic machine. The theory and practice of color photography are considered, and apparatus is at hand for the projection of photographs in colors from nature.

Physiography and Agricultural Geology.

DR. WASHBURN.

The Freshman class study physiography during the fall term, with two exercises per week of recitation and one of laboratory work, and during the winter with one exercise per week of laboratory work, including occasional excursions and field work.

A well-equipped physiographic laboratory, with globes, models, maps, charts, and other illustrative material, together with a special library, is open to the students. Especial attention is given to the scientific phases of the study—to the chemistry and geology of the soils, the influence of air and water on the same, and the flora and fauna of the different countries. Davis's Physical Geography is taken as a basis; and Dana's Coral Islands, Shaler's Aspects of the Earth, and Dana's Characteristics of Volcanoes are thoroughly studied during the term. Five hundred lantern-slides, illustrating ethnological subjects, are projected and explained before the class. This course seems to be especially valuable to introduce the student to the scientific studies which are to follow.

General Mineralogy.—General mineralogy is taught in the winter term of the Junior year and consists of three exercises per week. A short course dealing with the elements of crystallography is given, together with the physical and chemical characteristics of minerals, especially of the rock-making minerals composing our soils. Laboratory work in blow-pipe analysis and physical deter-

mination of minerals follows the crystallography. The course is arranged so that it may be extended as an elective for another term.

AGRICULTURAL GEOLOGY.—The course in agricultural geology embraces structural, dynamical, and historical geology, particular attention being paid to the first-mentioned sub-division. A careful study is made of those minerals and rocks of importance in the formation of soils, of the agencies by which their decomposition is effected, and of the compounds which result. In this connection the instruction is designed to familiarize the student with the desirable mineral and physical features of soils, with those compounds the presence of which is undesirable or which may give rise to a greater or less degree of soil sterility, and with the means by which such conditions may be avoided or overcome. A proportionate amount of time is devoted to the history of those natural deposits of particular interest to agriculturists; such as nitrate of soda, the German potash salts, and phosphates of various kinds.

Botany.

PROFESSOR MERROW.

The required work in botany for students in the science courses begins in the fall term of the Sophomore year with a course called the biology of plants, which continues three terms. The object of this course is to give the student a knowledge of plant life, by the study of the plants themselves in the laboratory and in the field. Attention is given to representatives of the vegetable kingdom from the lowest to the highest. Some time is given to the determination of species, but the chief work of the course is the study of the structure of the plant, its activities, and its relation to its environment. In short, the course is adapted to the needs of the general student who desires a knowledge of the principles of biology as illustrated by our common plants, and also furnishes a good foundation to the student who is to follow more advanced

work in botany, agriculture, horticulture or medicine. Students wishing to emphasize botany in their choice of studies are given every opportunity to follow lines of work best suited to their needs. In the spring term a three-hour course is given which considers the native flora from an ecological and systematic standpoint. A similar course may be taken on the fall flora if desired. In both these courses emphasis is given to the weed-plants, the grass, clover, and rose families. The study of histology may be followed as a three or a six-hour course. It is believed that excellent advantages are offered to those who wish to elect work in the parasitic fungi of seed plants. The laboratory is provided with a supply of dry and alcoholic material, and collecting-fields for fresh material are near at hand.

Each student is supplied with a compound microscope, a dissecting microscope, re-agents, and small instruments. The laboratory is provided with apparatus for simple physiological experiments, a microtome, paraffin bath, charts, thirty Brendel models, Briosi and Cavara's Parasitic Fungi of Cultivated Plants, Ellis's Fungi Columbiani, Seymour and Earle's Economic Fungi, Arthur and Holway's Uredineae, and a collection of native plants. A good working library and several American and foreign periodicals are an important part of the equipment of the laboratory.

Zoölogy.

PROFESSOR BARLOW.

The work in zoölogy begins with a general course running through the year. Three periods, each two hours long, are given to this work. Beginning with the lowest and most simple forms of life, type forms from each important group are studied. Neatness and precision in dissection and accuracy in drawing are emphasized. During the fall term Protozoans, Coelenterates and Echinoderms are studied. Then follows a study of Worms, Arthropods and Mollusks, and in the spring term the Vertebrates are

taken up. This general course is considered essential to an understanding of the more practical studies which follow in the course, and is required of all Sophomores in the science courses.

Elective courses are offered in anatomy, physiology, embryology, histology, and economic zoölogy. Courses V (A) and III (B) are specially designed to meet the needs of those who are preparing to study medicine or veterinary science, while courses II (A) and IV (B) are specially designed for the latter class. Courses VII (A) and II (A) are designed to be of value to those who are to take up any of the various lines of agriculture and animal industry.

Instruction is largely by laboratory work and lectures. Text-books are used, and much reference work in standard texts and current periodicals is required.

Especial facilities for the study of the smaller farm animals are afforded by the college farm and experiment station poultry-yards. The experiments now in progress in the "hothouse" plans of raising poultry give unequalled advantages for study in this line. The rapid reproduction of poultry, rabbits, etc., makes them ideal material in studying living processes.

The marine fauna, occurring at a short distance from the college, in the ocean, Narragansett bay and numerous estuaries; the fresh-water fauna, occurring in the springs, ponds, and streams near by; together with an abundant land fauna of the smaller types of mammals, birds, reptiles, amphibians, fish and insects, make the locality especially favorable for field work.

For indoor study the department is well equipped with Leuckart's charts; Zeigler's and other models; manikins elucidating the anatomy of man, horse, and fowl, skeletons of all the domestic animals, a complete series of the principal vertebrated forms, each type being represented by skeleton and mounted skin. The collection includes many rare and remarkable forms from distant parts of the earth, such as the lung fishes, Hatteria, the wingless birds of New Zealand, and many Australian forms. The invertebrate series is represented in a similar way. The collection of Rhode Island birds and mammals is practically complete, and

most of the reptile and batrachian species of the state are represented.

The laboratory is provided with microtome, microscopes, and all necessary apparatus for microscopic work. In the library is the best literature of the subject, and a number of the leading current zoölogical journals are available at the experiment station or by special arrangement.

Psychology.

An elective course in psychology is offered during the winter and spring terms, to Juniors and Seniors. James's Briefer Course is used. Lectures and recitations are supplemented by reading and simple experiments.

Agriculture.

PROFESSOR CARD, DR. WHEELER, DR. CURTICE, MR. TYLER, MR. BURDICK.

The science of agriculture rests upon many sciences. Thorough training in agriculture therefore presupposes a foundation knowledge of these sciences. This foundation must be obtained in other departments of the institution.

The object of an agricultural education is to teach the why of farming, not the how. In other words, it is the especial province of an agricultural college to deal with the principles which underlie the various operations of the farm rather than with the methods of performing those operations. In doing this it does not underestimate the importance of knowing how to do farm work. It recognizes fully that there can be no complete success without such knowledge, but it believes that the average student can better learn these things on a well-managed, up-to-date farm than at an agricultural college. He can there gain experience and earn wages at the same time. At college he is on expense and earning nothing. Some practical operations can be better learned at college than elsewhere. These things the college will try to teach. It will not try to teach a man to become expert in

hoeing corn or in digging potatoes. To teach such things would mean that the student must miss many things of value which the college can teach and the farm cannot.

A college course in agriculture should teach a man those things which will enable him to make a success of his profession. It should do more; it should give him an educational training which will enable him to become a leader in the affairs of men. The world needs farmers; it needs men among farmers more. It is calling for such men. It offers them a liberal share of its rewards. Positions are waiting, opportunities are opening, possibilities exist, on every farm. To train men to fill these positions, to embrace these opportunities, to see the possibilities, is the object of the course in agriculture.

Special Course in Farm Practice.—A special course in farm practice was inaugurated in the fall of 1901, occupying six weeks immediately preceding the Christmas holidays. The design of this course is to give clear-cut, practical instruction in agriculture. It aims to emphasize a study of the soil and the plant as constituting the foundation of successful farm practice.

The following subjects were taken up during the course of 1901: soils and fertilizers, how soils are made, kinds of soil, the purchase, mixing, and use of commercial fertilizers; soil management, effects and methods of tillage, humus supply, moisture conservation, rotations, and cover crops; field-crops; fruit-growing; vegetable-gardening; the feeding and breeding of live stock; agricultural physics, mechanics as applied to farm implements, soil physics, weather and frosts; drainage; the plant, its method of life and its enemies; insect life, enemies of the farm and garden; wood-work; iron-work; farm business. Practical men from outside the college aided in the instruction.

This course met with a very favorable reception, attracting to it men from a wide range of experience. The class included practical farmers and farmers' sons, a retired business man, a college graduate, and men with factory and other experience. A most

gratifying fact was that all seemed pleased and felt that they were well repaid for attending. The expenses are kept as low as possible. A certificate of attendance is given at the completion of the course. No entrance examination is required.

SPECIAL COURSE IN POULTRY-KEEPING.—A special course in poultry-keeping continues for six weeks immediately following the Christmas vacation. The aim of the course is to give pointed, practical instruction in the science and art of poultry-keeping and to present the latest and best methods in practice and management. This pioneer course in poultry-keeping has been in progress for the past five years and has proved uniformly successful.

Theoretical or practical teaching is given in the following subjects: zoölogy, including anatomy, physiology, and embryology; breeds of fowls and their origin; principles of breeding, mating, care, and management; incubation and brooding; chemistry of foods; feeding; egg and flesh production; caponizing; fattening; killing, dressing, and marketing; the prevention of diseases; poultry plants, including location, drainage, buildings, drawing of plans, specifications, estimates, construction, ventilation and heating; records and accounts; crops raised for poultry or as an adjunct to the business.

The practical work includes individual practice in artificial incubation and brooding, and in preparation of fowls for the market. Frequent excursions are made to typical poultry plants for a study of their stock and practical management. An annual trip is made to either the Boston or New York poultry show. One of the strong features of the course consists in the fact that the students are brought in contact with a large number of practical poultrymen, who come to the college annually to assist in the instruction.

Early enrollment is necessary for admission to this course, as the number of applications frequently exceeds the number of students which can be accommodated. No entrance examinations

are required. Certificates of attendance are given at the close of the course.

Horticulture.

PROFESSOR CARD.

Work in horticulture is designed for students from all courses. It is felt that some knowledge of the subject may very properly form a part of every well-rounded education.

In the introductory course the aim is to discuss principles of general importance to all who have to deal with orchard or garden crops. The courses in pomology and vegetable-gardening are designed to give practical instruction in the growing of fruits and vegetables.

Landscape-gardening is especially recommended to those who seek to appreciate the beautiful in nature or in art. Its aim is to apply the principles of beauty, as evinced in the work of nature, to the art of embellishing grounds.

Forestry touches problems of import to every citizen interested in the public welfare. Owing to the intimate relation between forests and waterflow, the subject is often of more vital importance to the manufacturer than to the farmer.

The subject of plant-breeding appeals chiefly to those interested in the broader problems of biological development and relationship. A careful study of the amelioration and development of plants under culture throws light upon many of the general problems of evolution which are of interest to all thinking students.

The courses in reading and original investigation are designed chiefly for students who wish to make a specialty of horticulture.

Languages.

PROFESSOR WATSON, MISS KENYON, MISS SANDERSON, SR. ALOMÁ.

The subjects grouped under this head are English, German, French, Spanish, and Latin.

English—comprising composition, rhetoric, and literature—may be studied throughout the course. It is required during the first three years. The theory and practice of rhetoric are taught throughout the Freshman year, and the application of rhetorical principles is sought in exercises and themes. The Sophomores make a critical study of certain prose masterpieces and write essays and various short papers. The required work of the Juniors consists largely of a study of the leading poets from Chaucer to Tennyson. Collateral reading is supplied, and students are encouraged to special investigation along literary and historical lines. In the Senior year electives are offered in literature and themes.

In all courses three years of foreign language study are required for graduation; one preparatory and two advanced. It is desirable that two of the three years be spent upon one language.

A three years' course in German has been arranged, which is begun in the Freshman year. As far as possible the language itself is made the medium of instruction; and the subject is studied in grammar work, dictation, conversation, and translation —from English into German and from German into English. The course is carefully graded. As soon as a small vocabulary is acquired, the student begins the reading of simple prose and poetry, passing gradually to more difficult texts.

French may also be studied three years. Six courses are offered. The instruction in this language is similar to that given in German. Grammar, conversation, dictation, translation, and composition are taught.

A two years' course in Spanish is offered. The work is elective and is intended largely to meet the needs of those students who may wish to engage in business in Spanish-speaking countries. Special attention is therefore paid to conversation, reading, letter-writing, and commercial forms.

Latin is elective. The institution offers a two years' course. Should a student wish to pursue the subject farther, he may do so at his own expense, by taking private lessons of the instructor.

Much attention is paid to derivation of words, in order that such study may aid in comprehending the terminology of science.

History and Political Science.

MISS KENYON, DR. HEWES.

United States history is elective. English history is studied in connection with English literature during the Junior year and is required of all candidates for a degree. In the Senior year a course in modern European history from the beginning of the French revolution is offered as an elective. This may also be taken by students who have had the work in United States history. In all of these courses much use is made of the library.

Political science, offered in the fall term, consists of a study of the origin, development and present structure of our government—town, city, county, state and national. Special attention is paid to municipal problems and to the United States constitution. Extensive use of the library is necessary. The winter and spring terms are devoted to political economy, based upon Walker's Advanced Course. In the spring term special consideration is given to the application of the general principles to banking, finance and other present day problems.

Mathematics.

DR. HEWES.

Three courses in mathematics are prescribed for all candidates for a degree; the subjects being higher algebra, solid and spherical geometry and plane trigonometry. The work extends throughout the Freshman year and is of the utmost importance, both as a basis for further work in mathematics and science, and as a means for developing the power of logical reasoning and of exact and concise expression. It is the aim throughout the course to select such problems and applications as shall have direct bearing upon practical subjects.

Analytical geometry and calculus are required of students in the mechanical and electrical engineering courses, in addition to the above, and a number of electives are open to students who propose to make a specialty of mathematics or of any of the sciences which depend largely upon this subject. The course in analytical geometry, occupying the Sophomore year, includes the subject of loci and their equations, the analytical demonstration of many geometrical theorems, and the simpler properties of the conic sections. Analytic geometry of space with elementary discussion of quadric surfaces is studied in the spring term. The differential and integral calculus forms the work of the Junior year. The usual functions are differentiated and Taylor's and McLaurin's formulas developed. The student is taught to work examples and solve problems. The simpler integration methods are discussed. The practical applications of this subject include problems in maxima and minima of functions, the rectification of plane curves, the surfaces and volumes of solids of revolution and formulas of mechanics. The course is kept sufficiently broad to fit students for more advanced work.

Students wishing to prepare further for work along the lines of mechanical or electrical engineering are especially advised to elect courses in analytical mechanics, and differential equations; while those who desire to study pure mathematics may elect work in projective geometry, analytical geometry, theory of equations, theory of functions, etc. Students wishing to do special work in advanced subjects may arrange courses in geometry or analysis with the instructor.

Civil Engineering.

See Civil Engineering, under Courses of Instruction.

Mechanical Engineering.

PROFESSOR DRAKE, MR. RODMAN, MR. KNOWLES, MR. KNIGHT.

The aim of this department is to give sound theoretical and thorough practical training to students who seek to prepare them-

selves for useful and responsible positions. The course offered in shop-work will furnish such training as will ensure, other things being equal, marked success in mechanical pursuits subsequent to graduation. The regular four years' course deals with mechanical engineering as applicable to the industries carried on in New England and particularly in Rhode Island. Special attention is given to the designs and the economical operation of shops and mills, and of manufacturing and industrial machinery. The subjects of mechanism, metallurgy, heating and ventilation of buildings, engineering specifications, and laws of contracts are treated by lectures and text-books. The several laboratories are well equipped for working in wood and metals and for the testing of materials used in construction. Students in the course of mechanical engineering receive instruction in bench-work in wood, wood-turning, pattern-making, forging, machine-shop work and mechanical drawing.

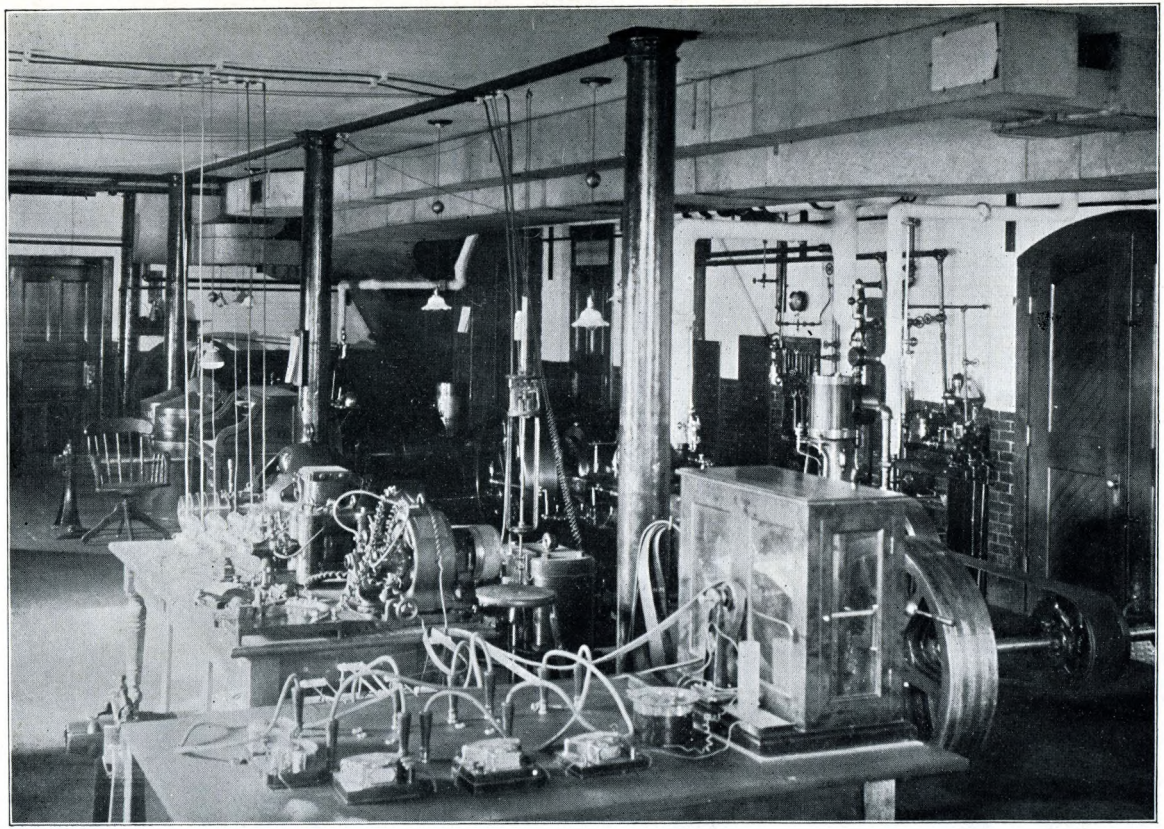
The carpenter shop contains benches and tools sufficient to accommodate twenty-four students at one time. The course is designed to give skill and confidence in working the various kinds of wood, and also to impart a fair knowledge of the principles of building and construction. The wood-turning room contains thirteen lathes, each with its complete set of gouges and turning tools. In the same room are benches for pattern-making, and also power machinery for working wood; such as circular saw, hand-saw, jig-saw, surface-planer, buzz-planer, mortising-machine, dowel-machine and others. All students take wood-turning, and during the period each has practice under the direct charge of the engineer in care of the shop, boiler and engine. The engine is of thirty horse-power. The work in pattern-making given to the students in the mechanical department consists in the making of selected pieces to illustrate the principles of shrinkage, drafts, finish, core-box making, built-up work, and the general requirements of pattern-making.

The forge shop will accommodate twelve students at one time. It contains twelve forges and anvils, a stock-cutter, a bolt-header,

a post-drill, and is well supplied with all the hammers, tongs, and other forge and anvil tools necessary for complete work. A regular course is followed here as in other lines; and for the students of the agricultural course the work is of such a nature as is found about a farm. The various operations of drawing, bending, upsetting, and welding are taught and applied in the making of such useful pieces as staples, hooks, chains, and iron work for farm tools. The students of the mechanical department follow a similar course, but in a direction more suited to the machine shop. Bolts, nuts, machine-forgings, chisels, and lathe tools are made, and afterward put to practical use. Only students in the engineering courses work in the machine shop.

The course here is designed to give a sure knowledge of and intelligent practice in the best modern methods of using the various tools; such as lathes, planers, drills, milling-machines and grinding-machines. A course of hand work at the bench is offered, and includes instruction in chipping, filing, scraping and finishing. Students of former years have made an engine, dynamo, speed lathe, full set of arbors, set of nut arbors, and a variety of other tools.

In experimental engineering the students make tests of engines, boilers, pumps, steam gauges, injectors and a hydraulic ram. The strength of materials is investigated theoretically in class under the head of mechanics of materials, and practically in the laboratory by conducting tests upon specimens of wood, iron, steel, brick, stone, cement, boiler-plate, etc. In hydraulics, water-meters are calibrated, and measurements of water made by orifices and wiers. During the spring term of the Senior year the class in mechanical engineering holds semi-weekly conferences; reports are given upon articles in the industrial magazines and journals, and engineering subjects of general interest are discussed. The following are some of the topics considered: types of steam-boilers, furnaces, boiler-feeders, fuels, lubricants, gas and heat engines, preparation and use of wood, cutting-tools for metals, pumping-machinery.



THE ELECTRICAL ENGINEERING LABORATORY.

Drawing.

PROFESSOR DRAKE, MISS ELDRED.

MECHANICAL DRAWING is required for a period of three years. Students keep notebooks, in which freehand sketches are made from models; and these sketches are afterward worked up into finished drawings. The making of working drawings for some machine completes the course. Practice in tracing and blue printing is given to all students. The course in drawing is designed to aid in the corresponding courses of shop work and not to produce professional draughtsmen.

FREEHAND DRAWING.—Freehand drawing is taught in the fall and spring terms and is required in the fall term, Freshman year. The required work comprises the study of perspective and values from objects, still life, and simple casts. Memory sketches of the objects drawn are expected of each student, who is also required to leave at the college a specimen of his work. The library contains an excellent collection of art books. In addition to the art electives, comprising drawing from still life and the cast, painting in oil, pastel and water-color, and modeling, special work will be arranged for scientific and mechanical students. An hour's study of the history of art, by means of reading, lectures and the use of photographs, with which the studio is well supplied, may be substituted for one hour of course III.

Electrical Engineering.

PROFESSOR SCOTT, MR. RADTKE.

The course in electrical engineering is offered to students who have completed courses I and II in physics.

The studies in electro-technology embrace fundamentally the theory of electricity and magnetism, followed by a thorough treatment of the various technical applications of electricity. These include the theory, design and manipulation of continuous and

alternating current generators and motors, transformers, and the storage battery; the design of generating and distributing plants for light and power; electrical testing; electro-metallurgy; telegraphy; telephony; electric signalling. The department is provided with a satisfactory plant for laboratory purposes, containing two sixty horse-power water-tube boilers; two high-speed engines of fifty and fifteen horse-power; one thirty K. W. 1000-v. Westinghouse compound alternator with exciter; two 110-v. continuous current generators, one twenty-five K. W., and the other eight K. W.; a storage battery of 110-30 amp. hour cells; several small dynamos and motors; transformers; condensers; arc and incandescent lamps; Lord Kelvin and Western voltmeters and ammeters; dynamometers; wattmeters; galvanometers; Wheatstone bridges; standard cells, and rheostats. Adequate means are supplied by a photometry room for testing and comparing electric and other forms of illuminating apparatus. The laboratory has also a two horse-power standard Leffel turbine water-wheel, engine lathe, and suitable material for the repairing and making of apparatus.

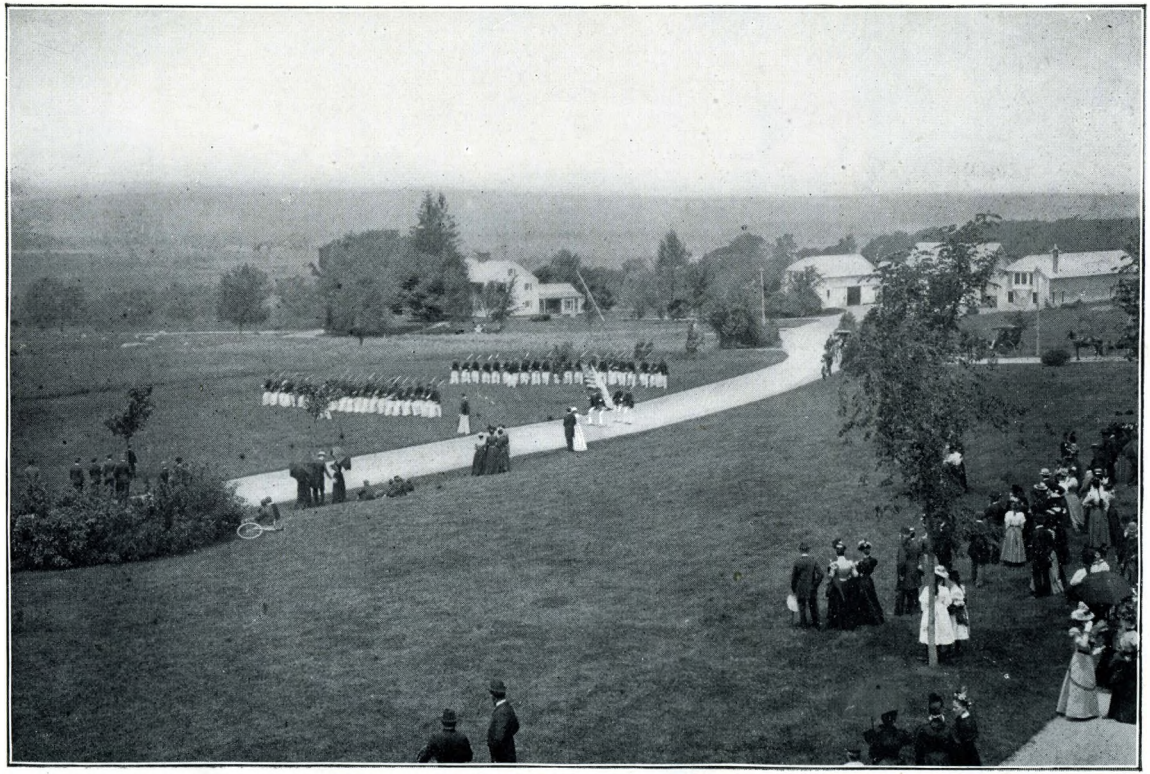
The course is open to special students who may not be able to spend the time for obtaining a degree. They will take such subjects as will most readily prepare them for their intended line of work.

Home Sanitation.

The object of this course is to present the application of scientific principles to the problems of the home. It deals with such questions as the situation and structure of the house, water supply, plumbing, disposal of wastes, heating, and ventilation. Instruction is by means of lectures, reading, and inspection visits. The course is given in the fall term and is open to students who have had the first two years of the college work or its equivalent.



STUDENTS IN DRILL HALL.



DRILL ON CAMPUS.

Stenography and Typewriting.

MISS GAGE.

Stenography and typewriting are offered as electives. A thorough knowledge of the common English branches is required of every one taking the course. The Chandler Practical Shorthand and either the touch or sight system of typewriting are taught. The shorthand work may be divided into two parts: first, the perfecting of the knowledge of the system; second, a graded course in dictation. In typewriting, the students are given a series of exercises consisting of words, sentences, phrases, business letters and forms, and other matter selected with reference to its variety and scope. Absolute accuracy is required from the first in both subjects, and particular attention is paid to spelling and punctuation.

Military Science and Tactics.

CAPTAIN SPARROW.

Practical and theoretical instruction in military science and tactics is imparted to all male students not excused by reason of physical disqualification. The war department furnishes for use in this instruction cadet rifles, equipments, sabres, ordnance, and details an officer of the army to act as instructor. The cadets are organized into a company of infantry, and detachments of artillery and signalling. Theoretical instruction is by means of lectures and recitations. The military exercises improve the physique, and are elevating in influence on the mind and conduct of the cadets.

The organization is as follows:

Captains	Robert W. Pitkin,
	B. J. Cornell, Adjutant.
Lieutenants	R. N. Maxson,
	O. N. Ferry,
	L. Clarke.

1st Sergeant	R. W. Kent.
Sergeants	C. E. Whitmore, W. M. Hoxsie, W. Goddard, Jr., E. A. Tefft.
Corporals	T. G. Alomá, J. Gilman, W. A. Ballou, F. J. Carley, J. F. Schofield, B. C. Smith.

Courses of Instruction.

The following courses of instruction are offered in the different departments. All studies required of regular students lead to the degree of Bachelor of Science.

Chemistry.

I. General Chemistry.—Lectures, recitations, and laboratory work. *Winter and Spring terms, Freshman year; Winter term;* lectures and recitations, *2 exercises per week;* laboratory work, *2 exercises of 2 hours each per week. Spring term;* lectures and recitations, *3 exercises per week;* laboratory work, *2 exercises of 2 hours each per week. Required of all candidates for a degree.*

II. Qualitative Analysis.—Basic and acid analysis; analysis of salts. Industrial and natural products. Lectures, recitations, and laboratory work. *Fall and Winter terms, Sophomore year; 3 exercises of 2 hours each per week. Required of all candidates for a degree.*

III. Inorganic Preparations.—*Fall term, Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course.*

IV. Stoichiometry and Theoretical Chemistry.—Lectures and recitations. *Spring term, Sophomore year; 3 exercises per week. Required of all students in science.*

V. (A) Quantitative Analysis.—Gravimetric and Volumetric Analysis. Analysis of minerals. *Throughout the Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course.*

V. (B) Quantitative Analysis (Advanced course).—Analysis of minerals, ores, alloys, and industrial products. *Throughout the Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course.*

VI. Organic Chemistry.—Lectures, recitations, and laboratory work. *Fall and Winter terms, Junior year; lectures and recitations, 3 exercises per week;* laboratory work, *1 exercise of 2 hours per week. Required of students in the Chemical course.*

VII. Organic Preparations.—*Spring term, Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course.*

VIII. Sanitary Chemistry.—*Winter term, Junior year; 2 exercises of 2 hours each per week. Required of students in the Chemical course.*

IX. Mineralogy and Blowpipe Analysis.—*Winter term, Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course.*

X. Gas Analysis.—*Spring term, Junior year; 1 exercise of 2 hours per week. Required of students in the Chemical course.*

XI. Assaying.—*Spring term, Junior year; 1 exercise of 2 hours per week. Required of students in the Chemical course.*

XII. Industrial Chemistry.—Lectures and recitations. *Spring term, Junior year, and Fall term, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XIII. Organic Chemistry (Advanced course).—*Fall and Winter terms, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XIV. Theoretical Chemistry (Advanced course).—Lectures, recitations, and laboratory work. *Fall term, Senior year;* lectures and recitations, *3 exercises per week;* laboratory work, *2 exercises*

of 2 hours each per week. Required of students in the Chemical course.

XV. Physiological Chemistry and Toxicology.—*Spring term, Senior year; 3 exercises of 2 hours each per week; elective.*

XVI. Textile Coloring.—*Winter and Spring terms, Senior year; 3 exercises per week. Optional for students in the Chemical course with Chemistry XVIII and XIX as alternatives.*

XVII. Agricultural Chemistry.—*Winter and Spring terms, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XVIII. Electro-Chemistry.—*Winter term, Senior year; 3 exercises per week. Optional for students in the Chemical course with Chemistry XVI as alternative.*

XIX. Metallurgy.—Lectures and recitations. *Spring term, Senior year; 3 exercises per week. Optional for students in the Chemical course with Chemistry XVI as alternative.*

XX. Thesis Work.—*Throughout the Senior year. Required of students in the Chemical course.*

Physics.

I. General Course.—Study of mechanics, hydraulics, pneumatics and heat, *Fall term;* electricity and magnetism, *Winter term;* sound and light, *Spring term, Freshman year;* recitations, *2 exercises per week;* laboratory work, *1 exercise per week. Required of all candidates for a degree.*

II. Advanced Physics.—*Throughout the year; 3 exercises per week. Required of Sophomores in Engineering courses.*

III. Elementary Photography.—A course of lectures and recitations upon the optics and chemistry of photography, together with practical photographic work. *Spring term;* lectures, *2 exercises per week;* laboratory work, *1 exercise per week; elective, open to all students.*

IV. Advanced Photography.—A course of lectures on photomicrography, the making of lantern slides and bromide enlargements, and the manipulation of the optical lantern. *Spring term;* lectures, *1 exercise per week;* laboratory work, *2 exercises per week; elective, open to students who have taken course I.*

Physiography.

*II. Tarr's Physical Geography, with required reading from reference books.—Laboratory work and excursions. *Fall term, Freshman year; 3 exercises per week: Winter term, Freshman year; 1 exercise per week. Required of all candidates for a degree.*

III. Mineralogy. See Chemistry, IX.

Geology.

I. Agricultural Geology.—Lectures and recitations. *Winter term, Senior year; 2 exercises per week. Elective.*

Botany.

I. Biology of Plants.—The general principles of biology are illustrated by our common plants. Laboratory, reading and lectures. *Throughout the Sophomore year; 3 exercises of 2 hours each per week. Required of students in the Science courses.*

II. Fungi.—A study of fungi with special reference to parasitic forms of economic importance. Laboratory, reading and lectures. *Elective; open to students who have taken course I. Hours arranged with instructor.*

III. Histology.—Laboratory, reading and lectures. The laboratory work includes methods of imbedding, sectioning, staining and mounting. *Elective; open to students who have taken course I. Hours arranged with instructor.*

---

*Course I is given in the preparatory department.

IV. A study of the Spring Flora of Kingston, with practice in the identification of species. Special attention is given to the rose family. Field and laboratory, *Spring term; 3 exercises per week. Elective; open to students who have taken course I.*

V. A study of the Fall Flora of Kingston, with practice in the identification of species. Special attention is given to weed-plants, grasses, and the clover family. Field and laboratory, *Fall term; 3 exercises per week. Elective; open to students who have taken course I.*

VI. Plant-Life.—A study of the plant and its environment. The functions of root, stem and leaf, reproduction, and plant diseases are treated. Lectures and reading, illustrated by models, charts, demonstrations, and field and laboratory work. *A six weeks' course given in the winter school of Farm Practice.*

By consulting the instructor other arrangements may sometimes be made for those desiring to elect work in botany.

Zoölogy.

I. (B) Animal Biology.—Fall term, laboratory study of Amœba, Paramœcium, Euglenia, Grantia, Metridium; Winter term, Asterias, Nereis, Tænia, Ascarias, Gryllus, and Astacus; Spring term, Amphioxus, Mustelinus, Rana, Felis, and Columba. *Throughout the Sophomore year; 3 exercises of 2 hours each per week. Required in the Science courses and a prerequisite for courses IV (A), VI, and III (B).*

II. (A) Anatomy of the Horse.—Study of the skeleton and model and dissection. *Winter term; 3 exercises per week. Elective.*

III. (B) Physiology.—Comparative physiology of mammals. *Winter and Spring terms; 2 recitations and 1 laboratory exercise of 2 hours per week. Elective; open to students who have taken courses V (A) and I (B).*

IV. (A) Embryology.—The development of the chick and frog. *Spring term; 3 exercises of 2 hours each per week. Elective; open to students who have taken course I (B).*

IV. (B) Poultry and Poultry Parasites.— *Winter term; 3 exercises per week. Elective.*

V. (A) Vertebrate Anatomy.—Detailed study of the cat. *Fall term; 3 exercises of 2 hours each per week. Elective.*

VI. Normal Histology and Histological Methods.— *Winter term; 3 exercises of 2 hours each per week. Elective; open to students who have taken course I (B).*

VII. (A) Economic Entomology.—Study of forms of special interest to the agriculturist. *Fall term; 3 exercises of 2 hours each per week. Elective.*

VIII. (A) More advanced work in special topics may be taken up by special arrangement with the instructor.

Psychology.

I. Elementary Course.—Lectures, recitations, simple laboratory experiments. *Winter and Spring terms; 3 exercises per week. Elective for Juniors and Seniors.*

Agriculture.

I. Soils and fertilizers.—Origin and formation of soils; chemical and physical properties; temperature; moisture; effects of tillage and other conditions upon fertility. Fertilizers, source, classification and effects; economy in using; application and calculation of formulas. *Fall term, Junior year; 3 exercises per week. Required of Agricultural students.* Dr. Wheeler.

II. Farm Crops.—Needs of the plant; maintenance of fertility and humus; grains; grasses; clovers; forage crops and roots. *Winter term, Junior year; 3 exercises per week. Required of Agricultural students.* Professor Card.

III. Farm Equipment.—Selection and equipment of farms; buildings, fences, roads, water supply, farm power, field machinery and appliances. *Spring term, Junior year; 3 exercises per week. Required of Agricultural students not taking Horticulture V.* Professor Card and Mr. Burdick.

IV. Farm Management.—Farm capital, permanent and floating; distribution of capital; labor and its efficiency; profit or loss from the use of machinery; farm advertising; inventory and accounts; types of farming considered from a business standpoint. *Fall term; 2 exercises per week. Elective.* Professor Card.

V. Rural Economics.—History and development of agriculture; influence of location, climate and other factors upon the agriculture of a country; relation of agriculture to other industries, and to the body politic; farm law. *Winter term; 2 exercises per week. Elective.* Professor Card.

VI. Farm Surveying and Drainage.—Mapping of fields; location of drains; leveling and construction of farm drains. *Fall term; 2 exercises per week. Elective.* Mr. Tyler.

VII. Farm Animals.—Principles governing the choice and breeding of animals. Types and breeds of different kinds of animals. *Fall term; 3 exercises per week. Elective.* Dr. Curtice.

VIII. Farm Animals.—Principles of feeding, nutrition, assimilation and excrementation; selection; composition and digestibility of food-stuffs; feeding standards and compounding of rations; practice in the preparation of food and methods of feeding; principles of hygiene and management. *Winter term; 3 exercises per week. Elective.* Dr. Curtice.

IX. Dairy Husbandry.—Care and management of dairy cattle; buildings and equipment; milk production, composition, management, aeration, pasteurization, sterilization, testing, preservation, transportation; creaming. *Spring term; 3 exercises per week. Elective.* Dr. Curtice.

X. Poultry Raising.—Domestic fowls—kinds, breeds, selection and breeding; buildings—location and arrangement, construction and furnishing, ventilation, yards and parks; foods and feeding; care and management, production of eggs and flesh, fattening; dressing and marketing; incubation, natural and artificial; rearing; diseases and enemies; caponizing. *Spring term; 3 exercises per week. Elective.* Dr. Curtice.

XI. Agricultural Experimentation.—Objects, methods and results of agricultural experimentation; precautionary measures; sources of error; interpretation of results. *Spring term; 2 exercises per week. Elective.* Dr. Wheeler.

XII. Agricultural Literature.—Seminary courses in the literature of special subjects. *By arrangement.*

XIII. Original Investigations.—For advanced students only. *By arrangement.*

Horticulture.

I. Principles of Horticulture.—A discussion of fundamental principles underlying horticultural operations in orchard, garden and greenhouse. *Fall term; 2 recitations and 1 laboratory period per week. Elective.*

II. Pomology.—Lectures and supplementary reading. Designed to give practical instruction in fruit-growing. *Winter term; 3 exercises per week. Elective.*

III. Vegetable-Gardening.—Methods of growing garden vegetables in the open ground and under glass. *Winter term; 3 exercises per week. Elective.*

IV. Landscape-Gardening.—The principles underlying landscape-gardening as a fine art, with discussion of the ornamentation of home-grounds, school-grounds, cemeteries, parks, highways and other public grounds. Lectures and supplementary reading. *Fall term; 3 exercises per week. Elective.*

V. Forestry.—General importance of forests, their influence on climate and water supply, methods of regeneration, and systems of forest management. Lectures and supplementary reading. *Spring term, Junior year; 3 exercises per week. Required of Agricultural students not taking Agriculture III.*

VI. Plant-Breeding.—A discussion of the development of plants under culture, with especial reference to problems of heredity, environment, variation, selection and evolution. Lectures and supplementary reading. Open to students who have had course I in botany. *Fall term; 2 exercises per week. Elective.*

VII. Horticultural Literature.—A seminary course designed to give familiarity with horticultural writings, ancient and modern. *By arrangement. Elective.*

VIII. Original Investigation.—For advanced students only. *By arrangement. Elective.*

English.

*II. Rhetoric.—Text-book study and practical application of rhetorical principles in themes and exercises. *Throughout the Freshman year; 2 exercises per week. Required of all candidates for a degree.*

III. Critical study of certain prose masterpieces, with essays and various short papers. *Throughout the Sophomore year; 2 exercises per week. Required of all candidates for a degree.*

IV. General English Literature.—Largely a study of Chaucer, Shakespeare, Milton, Wordsworth, Tennyson, Browning, and their times. Essays and collateral reading required. *Throughout the Junior year; 2 exercises per week. Required of all candidates for a degree.*

V.—Special English Literature.—Study of special periods and

---

* Course I, Elementary English, is given in the preparatory school.

authors. *Throughout the year; 3 exercises per week. Elective; open to students who have taken courses I–IV or their equivalent.*

VI. Special Work in Themes. *Throughout the year. Elective; open to students who have taken courses I–IV or their equivalent.*

German.

I. Elementary Course.—Grammar, dictation, conversation, reading of easy prose and poetry. *Fall term, Freshman year; 5 exercises per week; Winter and Spring terms; 4 exercises per week. Required of all candidates for a degree who do not offer French.*

II. Reading of intermediate texts, composition, conversation. *Fall term, Sophomore year; 3 exercises per week. Open to students who have taken course I or its equivalent, and required of all candidates for a degree who do not offer French.*

III. German Classics.—*Winter and Spring terms, Sophomore year; 3 exercises per week. Open to students who have taken courses I and II or their equivalent, and required of all candidates for a degree who do not offer French.*

IV. Goethe's Meisterwerke (Bernhardt).—*Fall term; 3 exercises per week. Elective; open to those who have taken courses I–III or their equivalent.*

V. Study of Schiller or Heine.—*Winter term; 3 exercises per week. Elective; open to those who have taken courses I–III or their equivalent.*

VI. Study of Freytag.—*Spring term; 3 exercises per week. Elective; open to those who have taken courses I–III or their equivalent.*

VII. Scientific German.—Special work assigned by different professors. *Elective; open to those who have taken courses I–III or their equivalent.*

French.

I. Elementary Course.—Grammar, dictation, conversation, reading of easy prose and poetry. *Fall term, Freshman year; 5 exercises per week: Winter and Spring terms; 4 exercises per week. Required of all Freshmen not taking German or Latin and not offering French for admission.*

II. Reading of intermediate texts, composition, conversation.—*Throughout the Sophomore year; 3 exercises per week. Required of all candidates for a degree who do not offer German.*

III. French Classics.—*Throughout the year; 3 exercises per week. Elective; open to students who have taken courses I and II.*

IV. Lyrics of the Nineteenth Century.—*Fall term; 3 exercises per week. Elective; open to those who have taken courses I and II or their equivalent.*

V. Study of Victor Hugo.—*Winter term; 3 exercises per week. Elective; open to those who have taken courses I and II or their equivalent.*

VI. Scientific French.—Special work assigned by different professors. *Elective; open to those who have taken courses I and II or their equivalent.*

Spanish.

I. Elementary Course.—Grammar (Loiseaux or Manning), dictation, conversation, letter-writing, commercial forms, reading of easy prose: Reader (Loiseaux or Matzke), Doce Cuentos Escogidos (Fontaine), El Pájaro Verde (Valera). *Elective. Throughout the year; 3 exercises per week.*

II. Advanced Course.—Composition (Ford or Ramsey). Reading of more difficult texts: Gil Blas (translation of El Padre Isla); Ó Locura Ó Santidad (Echegaray); Doña Perfecta, Marianela (Galdós); El Capitán Veneno (Alarcón). *Elective. Throughout the year; 3 exercises per week.*

Latin.

*II. Cæsar or selections from various Latin authors. *Elective. Throughout the year; 3 exercises per week.*

History and Political Science.

†II. Constitutional and Political History of the United States. Based on Hart's Epochs of American History.—Lectures, recitations, readings and reports.—*Throughout the year; 3 exercises per week. Elective.*

III. English History.—This subject forms a part of the required work in English IV.

IV. Modern European History from the beginning of the French Revolution.—*Throughout the year; 3 exercises per week. Elective for Juniors and Seniors.*

V. Science of Government.—Town, city, county, state and United States. Their origin, development and practices. Critical analysis of the Constitution of the United States. Lectures, recitations and reports. *Fall term, Senior year; 3 exercises per week. Required of all candidates for a degree.*

VI. Political Economy.—General principles. Based on Walker's Advanced Course.—Lectures, recitations, discussions, readings, essays. Consideration of present day problems. *Winter and Spring terms, Senior year; 3 exercises per week. Required of all candidates for a degree.*

Mathematics.

‡IV. College Algebra (Taylor).—The theory of limits; differentiation; development of functions in series; permutations and combinations; determinants. *Fall term, Freshman year; 4 exercises per week. Required of all candidates for a degree.*

---

* Course I, Elementary Latin, is given in the preparatory school.
† Course I, General History, is given in the preparatory school.
‡ Courses I, II and III are given in the preparatory school.

V. Plane Trigonometry (Bowser).—The derivation of the fundamental formulas; logarithms; the solution of right and oblique triangles; practical problems. *Spring term, Freshman year; 3 exercises per week. Required of all candidates for a degree.*

VI. Solid Geometry (Phillips and Fisher).—Lines and planes in space; polyhedrons; the cylinder, cone and sphere; measurement of solids; numerical examples and original demonstrations. *Winter term, Freshman year; 3 exercises per week. Required of all candidates for a degree.*

VII. Analytical Geometry (Ashton).—Coördinate systems; the point, line and circle; relation between different coördinate systems; the equation of the first degree, the straight line; the general equation of the second degree and simple properties of the conic sections. *Fall and Winter terms, Sophomore year; 3 exercises per week. Required of students in the Engineering courses.*

VII. (A) Solid Analytical Geometry (Ashton).—Coördinates of points in ordinary space; the line, plane and quadric surfaces. *Spring term, Sophomore year; 3 exercises per week. Required of students in Engineering courses.*

VIII. Calculus (Osborne).—The differentiation of the ordinary functions, and development of Taylor's and Maclaurin's formulas. Integration of fundamental forms; definite integrals; applications to geometry and mechanics; curve tracing. *Throughout the Junior year; 3 exercises per week. Required of students in the Engineering courses.*

IX. Differential Equations (Murray).—*Senior year; 2 exercises per week. Elective for students who have completed course VIII.*

X. Analytical Mechanics.—*Senior year; 3 exercises per week. Elective for students who have completed course VIII.*

Civil Engineering.

I. Surveying.—Theory and practice; problems in the use and adjustment of modern surveying instruments; land surveying;

computations and plotting. *Fall term; 1 classroom exercise, 2 exercises of three hours each of field-work per week. Elective.* Mr. Tyler.

II. Land Drainage (see Agriculture).—Sources of water; necessity of drainage; kinds of drains; action of drains; planning systems of drainage; drain tiles; construction and care of drains. *Fall term; 2 exercises per week. Elective.* Mr. Tyler.

III. Surveying.—City, including highway, street, and railway. Theory and practice. *Spring term; 1 classroom exercise, 2 exercises of field-work per week. Elective for students who have taken course I.* Mr. Tyler.

IV. Descriptive Geometry (see Mechanics III).—Professor Drake.

V. Strength of Materials (see Mechanics XVIII).—Professor Drake.

VI. Hydraulics (see Mechanics XXI).—Professor Drake.

VII. Construction and Design of Framed Structures (Du Bois, Stresses in Framed Structures).—This course is open to engineering students who have qualified in the underlying mathematical and mechanical principles. It includes the computation of stresses in roofs and bridges by analytical and graphical methods and the study in detail of the more important types of bridge trusses. In the latter half of the course the structural principles are applied to designing and erection of work if time permits. *Winter and Spring terms; 3 exercises per week. Elective.* Dr. Hewes.

VIII. Masonry Structures (Baker).—This course deals with the materials of masonry, including brick, stone, lime, and cement; the theory of masonry structures, including foundations for buildings, bridges and piers; the construction of retaining walls, culverts, bridge abutments; masonry dams and arches. The student is directed to important articles in the current literature

of the subject, and laboratory work is performed at intervals as facilities and ability of the student permit. *Winter term; 2 exercises per week. Elective.* Dr. Hewes.

IX. Road Building.—This is a short course in practical highway work. It includes the application of engineering principles to the preliminary survey and estimate of cost of building and rebuilding roads in town and country. The subjects of surfacing old and new roads with gravel or stone and the drainage and repair of them receive particular emphasis. The details of staking out work, placing catch basins, curbs, culverts, etc., and the crushing and rolling of stone are discussed. The student is directed to state and government reports and required to read selected topics in the literature of the subject. *Spring term; 2 exercises per week. Elective.* Dr. Hewes.

Mechanics.

I. Mechanical Drawing.—Elementary principles, use of tools, inking in, geometrical drawing. *Fall and Winter terms, Sophomore year; 2 periods of 2 hours each per week required for a degree in Engineering courses.*

II. Mechanical Drawing.—Screw threads, bolts and nuts, shade lines, line shading. *Spring term, Sophomore year; 2 periods of 2 hours each per week. Required for a degree in Engineering courses.*

III. Mechanical Drawing.—Descriptive geometry. *Spring term, Sophomore year; 3 periods of 2 hours each per week. Required for a degree in Engineering courses.*

IV. Mechanical Drawing.—Machine details and parts, tracing, blue printing. *Fall term, Junior year; 4 periods of 2 hours each per week. Required for a degree in Mechanical Engineering.*

V. Mechanical Drawing.—Elements of machine design. *Winter term, Junior year; 3 periods of 2 hours each per week. Required for a degree in Engineering courses.*

VI. Mechanical Drawing.—Practical machine design. *Fall term, Senior year; 3 periods of 2 hours each per week. Required for a degree in Engineering courses.*

VII. Mechanical Drawing.—Elements of topographical drawing as introductory to land surveying.— *Winter term; 1 period of 2 hours per week. Required as introductory to course II, Civil Engineering.*

VIII. Wood-working.—Use of tools, bench work and carpentering. *2 exercises of 3 hours each per week. Required for a degree in Engineering courses. Students must receive credit for this course before beginning the work of the Junior year.*

IX. Wood-working.—Wood-turning. *Spring term; 3 exercises of 3 hours each per week. Required for a degree in Engineering courses. Students must receive credit for this course before beginning the work of the Junior year.*

X (A). Pattern Making.—*Fall term, Junior year; 2 exercises of 2 hours each per week. Required for a degree in Mechanical Engineering.*

XI. Shopwork.—Forging, drawing, bending, welding and tool dressing. *Winter term, Junior year; 2 exercises of 3 hours each per week. Required for a degree in Mechanical Engineering.*

XIII. Machine-shop Practice.—*Spring term, Junior year, and Fall term, Senior year; 3 exercises of 3 hours each per week for students in Mechanical Engineering. Winter and Spring terms, Junior year; 2 exercises of 3 hours each per week for students in Electrical Engineering.*

XIV. Wood-carving.—Care and use of tools, geometrical motives, diaper patterns, incised carving, flat and curved surface carving, historic ornament, low relief and high relief. *1 exercise of 3 hours per week. Elective.*

XV. Steam Boilers.—Types, construction, strength, uses and management. *Winter term, Senior year; 3 exercises per week. Required for a degree in Mechanical Engineering.*

XVI. Thermodynamics.—As directly applied to the steam engine. Simple and compound engines. *Winter term, Junior year; 3 exercises per week. Required for a degree in Mechanical Engineering.*

XVII. Steam Engineering. — Valve gears, regulators, condensers, power plants, tests. *Spring term, Junior year; 3 exercises per week. Required for a degree in Mechanical and Electrical Engineering.*

XVII (A). Transporting Machinery.—*Spring term, Senior year; 3 exercises per week. Required for a degree in Mechanical Engineering.*

XVIII. Strength of Materials.—Wood, iron, steel, alloys, brick, stone and cements. *Spring term, Junior year; 3 exercises and 1 laboratory exercise of 2 hours per week. Required for a degree in Mechanical Engineering.*

XIX. Theoretical and Applied Mechanics.—Bodies at rest and in motion, friction of rest and motion, energy, work and power. *Fall term, Senior year; 4 exercises per week. Required for a degree in Mechanical Engineering.*

XX. Graphic Statics of Structures and Machines.— *Winter term, Senior year; 4 exercises per week. Required for a degree in Mechanical Engineering.*

XXI. Hydraulics.—Flow of water through pipes, orifices and sewers. Measurement of flow of rivers and streams. Water power and water supply. *Spring term, Senior year; 4 exercises per week. Required for a degree in Engineering courses.*

XXII. Engineering Laboratory.—Physical tests of materials used in industries and in construction. Tests of machines and apparatus. *Throughout the Senior year; 2 lectures and 1 laboratory exercise per week. Required for a degree in Mechanical Engineering.*

XXIII. Mill Construction.—Lectures upon the structural development and design of shops and mills. *Fall term, Senior year; 3 exercises per week. Required for a degree in Engineering courses.*

XXIII (A). A mill equipment. *Winter term, Senior year; 3 exercises per week. Elective.*

XXIV. Metallurgy.—Cast iron, wrought iron, steel, copper, tin, lead, zinc and alloys. *Fall term, Junior year; 3 exercises per week. Required for a degree in Engineering courses.*

XXV. Textile Machinery.—Lectures upon types of machinery and processes for the manufacture of cotton and woolen goods. *Spring term, Senior year; 3 exercises per week. Required for a degree in Mechanical Engineering.*

Drawing and Modeling.

I. Freehand Drawing.—Drawing in charcoal from objects. Memory sketches required. *Fall term, Freshman year; 1 exercise of 2 hours per week. Required of all candidates for a degree.*

II. Drawing in Charcoal from Still Life and the Cast. *Spring term; 3 exercises of 2 hours per week. Elective.*

III. Drawing in charcoal from still life and the cast.—*Fall term; 3 exercises of 2 hours per week. Elective.*

IV. Modeling.—*Full term; 3 exercises of 2 hours per week. Elective.*

Electrical Engineering.

I. Electrical Measurements and Electrical Machinery.—A course of lectures and laboratory work upon electrical measurements, testing of instruments, dynamos and motors. *Throughout the Junior year; 4 exercises per week for students in Electrical Engineering; 3 exercises per week for students in Mechanical Engineering.*

II. Applied Electricity.—A course of lectures accompanied by laboratory work upon modern practical applications of electricity. *Throughout the Senior year; 4 exercises per week for students in Electrical Engineering. Other students may elect the work as a three-hour course.*

Home Sanitation.

I. A course of lectures, reading, and inspection visits. Situation and structure of the house; water supply; plumbing; disposal of waste; heating and ventilation. *Fall term; 3 exercises per week. Elective.*

Stenography.

I. Elementary Course.—Instruction in principles; dictation. *Throughout the year; 4 exercises per week. Elective.*

II. Advanced Course.—Dictation, including the following: business letters, legal documents, terms used, deeds, wills, mortgages, contracts, declarations, etc.; hints useful in office work; general dictation. *Throughout the year; 3 periods per week. Elective.*

The Courses of Study Leading to a Degree.

Freshman Year: introductory to all courses.

Fall.		*Winter.*		*Spring.*	
English II‡	2	English II‡	2	English II‡	2
German I*	5	German I*	4	German I*	4
Mathematics IV	4	Mathematics VI	3	Mathematics V	3
Physics I	3	Physics I	3	Physics I	3
Physiography II	3	Physiography II	1	Chemistry I	5
Freehand Drawing I	1	Chemistry I	4		
Military Drill and Tactics.		Military Drill and Tactics.		Military Drill and Tactics.	

Sophomore Year: for Engineering Courses.

English III	2	English III	2	English III	2
German II*	3	German III*	3	German III*	3
Chemistry II	3	Chemistry II	3	Physics II	3
Physics II	3	Physics II	3	Mathematics VII (A)	3
Mathematics VII	3	Mathematics VII	3	Mechanics III	3
Mechanics I	2	Mechanics I	2	Mechanics II	2
Military Drill and Tactics.		Military Drill and Tactics.		Military Drill and Tactics.	

Sophomore Year: for Science Courses.

English III	2	English III	2	English III	2
German II*	3	German III*	3	German III*	3
Chemistry II	3	Chemistry II	3	Chemistry IV	3
Zoölogy I (B)	3	Zoölogy I (B)	3	Zoölogy I (B)	3
Botany I	3	Botany I	3	Botany I	3
Elective†	3	Elective†	3	Elective†	3
Military Drill and Tactics.		Military Drill and Tactics.		Military Drill and Tactics.	

*By advice of the committee on courses of study, French may be substituted for German.

†With the advice of the committee on courses of study, the student chooses his electives from the courses described on pages 47–65.

‡The Roman numerals refer to the course numbers; see pages 47–65.

Junior Year: Engineering Courses.

	Fall.	*Winter.*	*Spring.*
Mechanical Engineering.	English IV†..... 2	English IV†..... 2	English IV†..... 2
	Mathematics VIII..... 3	Mathematics VIII..... 3	Mathematics VIII..... 3
	Electrical Engineering I.... 3	Electrical Engineering I.. 3	Electrical Engineering I.... 3
	Mechanics IV..... 4	Mechanics V..... 3	Mechanics XIII..... 3
	Mechanics X (A)..... 2	Mechanics XI..... 2	Mechanics XVII 3
	Mechanics XXIV..... 3	Mechanics XVI..... 3	Mechanics XVIII..... 4
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
Electrical Engineering.	English IV. 2	English IV..... 2	English IV..... 2
	Mathematics VIII..... 3	Mathematics VIII..... 3	Mathematics VIII..... 3
	Electrical Engineering I.... 4	Electrical Engineering I.. 4	Electrical Engineering I... 4
	Mechanics XXIV..... 3	Mechanics XIII..... 2	Mechanics XIII..... 2
	Military Drill and Tactics.	Mechanics V..... 3	Mechanics XVII..... 3
	Elective*..... 5	Military Drill and Tactics.	Military Drill and Tactics.
		Elective*..... 3	Elective*..... 3

Junior Year: Science Courses.

Agriculture.	English IV..... 2	English IV..... 2	English IV..... 2
	Agriculture I..... 3	Agriculture II..... 3	Agriculture III or Horticulture V 3
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective*.....12	Elective*.....12	Elective*.....12
	(At least eight hours must be chosen from subjects bearing directly on agriculture.)	(At least eight hours must be chosen from subjects bearing directly on agriculture.)	(At least eight hours must be chosen from subjects bearing directly on agriculture.)

*With the advice of the committee on courses of study the student chooses his electives from the courses described on pages 47-65.

†The Roman numerals refer to the course numbers; see pages 47-65.

Junior Year: Science Courses.

	Fall.	*Winter.*	*Spring.*
Biology.	English IV†..... 2	English IV†..... 2	English IV†..... 2
	Biology..... 6	Biology..... 6	Biology..... 6
	(Credit will be given for all courses in Zoölogy and Botany, and for Horticulture VI.)	(Credit will be given for all courses in Zoölogy and Botany, and for Horticulture VI.)	(Credit will be given for all courses in Zoölogy and Botany, and for Horticulture VI.)
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective*..... 9	Elective*..... 9	Elective*..... 9
Chemistry.	English IV..... 2	English IV..... 2	English IV..... 2
	Chemistry V (A)..... 3	Chemistry V (A)..... 3	Chemistry V (A)..... 3
	Chemistry V (B)..... 3	Chemistry V (B)..... 3	Chemistry V (B)..... 3
	Chemistry VI..... 4	Chemistry VI..... 4	Chemistry VII..... 3
	Chemistry III..... 3	Chemistry VIII..... 2	Chemistry X..... 1
	Military Drill and Tactics.	Chemistry IX..... 3	Chemistry XI..... 1
	Elective (not a chemical subject)*..... 3	Military Drill and Tactics.	Chemistry XII..... 3
		Elective (not a chemical subject)*..... 3	Military Drill and Tactics.
			Elective (not a chemical subject)*..... 3
General Science.	English IV..... 2	English IV..... 2	English IV..... 2
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective*.....15	Elective*.....15	Elective*.....15
	(A minimum of six hours of science must be chosen.)	(A minimum of six hours of science must be chosen.)	(A minimum of six hours of science must be chosen.)

* With the advice of the committee on courses of study the student chooses his electives from the courses described on pages 47-65.

† The Roman numerals refer to the course numbers; see pages 47-65.

Senior Year: Engineering Courses.

	Fall.	*Winter.*	*Spring.*
Mechanical Engineering.	Political Science V†..... 3	Political Science VI†..... 3	Political Science VI†..... 3
	Mechanics VI..... 3	Mechanics XX..... 4	Mechanics XVII (A)..... 3
	Mechanics XIX..... 4	Mechanics XV..... 3	Mechanics XXI..... 4
	Mechanics XIII..... 3	Mechanics XXII..... 2	Mechanics XXII..... 2
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective..... 3	Elective..... 3	Elective..... 3
	(To be chosen from the following: Mechanics XXIII, Electrical Engineering II, Mathematics IX, X, Civil Engineering.)	(To be chosen from the following: Mechanics XXIII (A), Electrical Engineering II, Mathematics IX, X, Civil Engineering.)	(To be chosen from the following: Mechanics XXV, Electrical Engineering II, Mathematics XI, Civil Engineering.)
Electrical Engineering.	Political Science V..... 3	Political Science VI..... 3	Political Science VI..... 3
	Electrical Engineering II... 4	Electrical Engineering II. 4	Electrical Engineering II.. 4
	Mechanics VI..... 3	Mechanics XV..... 3	Inspection Excursions.
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective..... 6	Elective..... 6	Elective..... 6
	(At least three hours must be chosen from the departments of Mathematics, Mechanics or Civil Engineering.)	(At least three hours must be chosen from the departments of Mathematics, Mechanics, or Civil Engineering.)	(At least three hours must be chosen from the departments of Physics, Mechanics, Mathematics, or Civil Engineering.)

Senior Year: Science Courses.

Agriculture.	Political Science V..... 3	Political Science VI..... 3	Political Science VI..... 3
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective*.....14	Elective*.....14	Elective*.....14
	(At least eight hours must be chosen from subjects bearing directly on agriculture.)	(At least eight hours must be chosen from subjects bearing directly on agriculture.)	(At least eight hours must be chosen from subjects bearing directly on agriculture.)

* With the advice of the committee on courses of study, the student chooses his electives from the courses described on pages 47-65.

† The Roman numerals refer to the course numbers; see pages 47-65.

Senior Year: Science Courses.

	Fall.	*Winter.*	*Spring.*
Biology.	Political Science V†..... 3	Political Science VI†..... 3	Political Science VI†..... 3
	Biology..... 9	Biology..... 9	Biology..... 9
	(Credit will be given for all courses in Zoölogy and Botany, and for Horticulture VI.)	(Credit will be given for all courses in Zoölogy and Botany, and for Horticulture VI.)	(Credit will be given for all courses in Zoölogy and Botany, and for Horticulture VI.)
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective*..... 3	Elective*..... 3	Elective*..... 3
Chemistry.	Political Science V..... 3	Political Science VI..... 3	Political Science VI..... 3
	Chemistry XIII..... 3	Chemistry XIII..... 3	Chemistry XVII..... 3
	Chemistry XIV..... 5	Chemistry XVII..... 3	Special Chemistry..... 3
	Chemistry XII..... 3	Chemistry XVI or XVIII. 3	Chemistry XVI or XIX.
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective..... 3	Elective..... 3	Elective..... 3
	(To be chosen from the following: History II, IV, French, German.)	(To be chosen from the following: History II, IV, French, German, Psychology.)	(To be chosen from the following: History II, IV, French, German, Psychology, Chemistry XV.)
General Science.	Political Science V..... 3	Political Science VI..... 3	Political Science VI..... 3
	Military Drill and Tactics.	Military Drill and Tactics.	Military Drill and Tactics.
	Elective*.....12	Elective*.....12	Elective*.....12
	(A minimum of six hours of science must be chosen.)	(A minimum of six hours of science must be chosen.)	(A minimum of six hours of science must be chosen.)

* With the advice of the committee on courses of study, the student chooses his elective from the courses described on pages 47–65.

† The Roman numerals refer to the course numbers; see pages 47–65.

The Preparatory School

OF THE

Rhode Island College of Agriculture and Mechanic Arts.

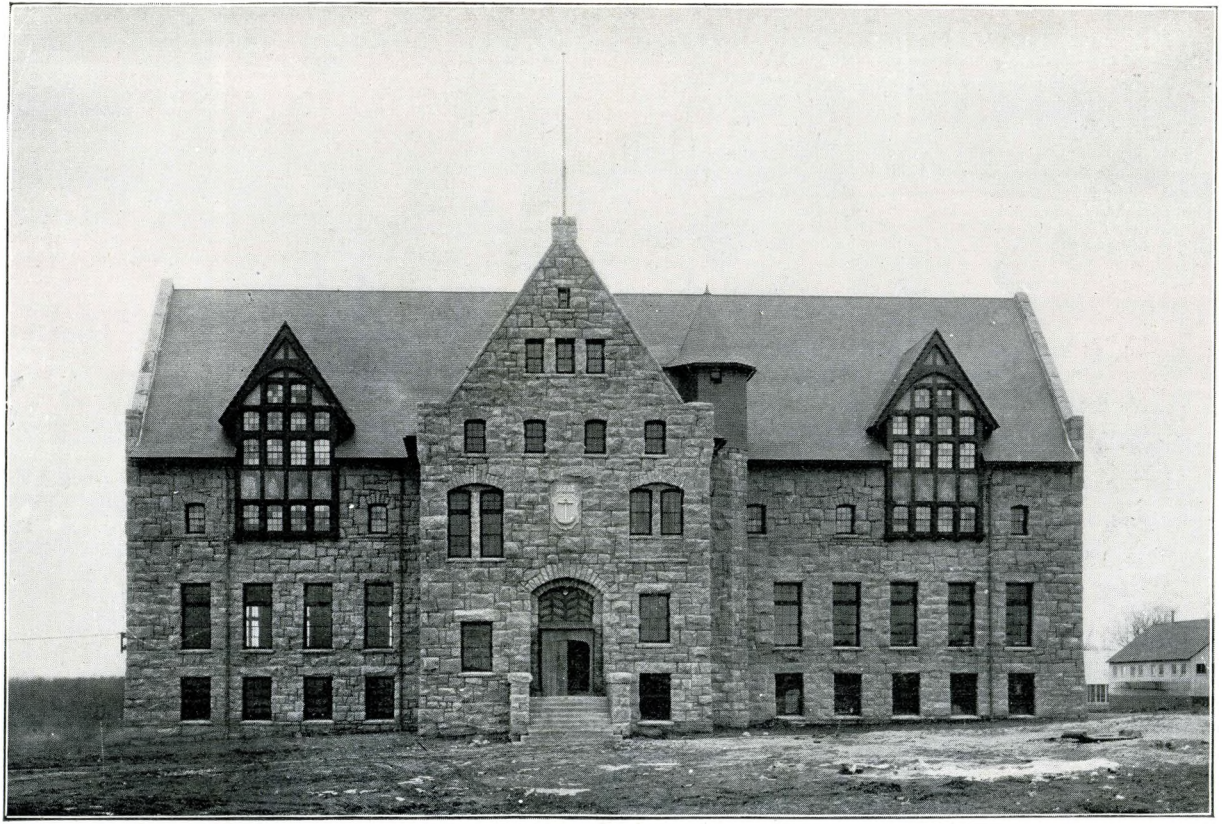
The preparatory school is intended for young men and young women who have not the privileges of a high school, and also for those who, because of maturity, are out of touch with the public schools.

Requirements for Admission to Preparatory School.

Candidates for admission must bring testimonials of good character, and must be not less than fifteen years of age.

For admission to the first year in the preparatory school, oral or written examinations will be given in arithmetic, geography, English grammar and United States history. In the arithmetic examination special attention will be paid to common and decimal fractions, denominate numbers, percentage and interest. Whitney and Lockwood's English grammar and Fiske's United States history are recommended. In English, each candidate will be required to answer certain questions in grammar, and to write a short composition correct in spelling, capitalization, punctuation and paragraphing, on a subject announced at the time of the examination. Candidates will be expected to show familiarity with the following works: Hawthorne's The Great Stone Face and the Snow Image; Tennyson's Idylls of the King; DeFoe's Robinson Crusoe; The Arabian Nights; Macaulay's Lays of Ancient Rome. Useful editions of these works will be found either in the Riverside School Library or the Riverside Literature Series, published by Houghton, Mifflin and Company.

Students wishing to enter the second-year class in this school will be examined in geography and United States history, ad-



LIPPITT HALL.

vanced arithmetic, algebra to quadratics, and English. In 1902 the English requirements will cover Shakespeare's The Merchant of Venice and Macbeth; Pope's Iliad, books I, VI, XXII, XXIV; Addison's The Sir Roger de Coverley Papers; Scott's Ivanhoe; Cooper's The Last of the Mohicans; Lowell's The Vision of Sir Launfal; Coleridge's The Ancient Mariner.

Any mature person who can satisfy the examining committee that he has the capacity to do the work, may enter on probation and take the examination later.

Course of Study.

FALL TERM.

First Year Preparatory.	Hrs. per week.	*Second Year Preparatory.*	Hrs. per week.
Advanced Arithmetic	5	Algebra	3
English	6	Geometry	4
General History	3	English	3
Physiography	2	Latin	5

Electives.—Freehand Drawing, Carpentering, Practical Mechanics, Agriculture, Stenography.

WINTER TERM.

Algebra	5	Algebra	3
English	5	Geometry	4
General History	3	English	3
Botany	2	Latin	5
Physiography	1		

Electives.—Carpentering, Wood-carving, Practical Mechanics, Agriculture, Stenography.

SPRING TERM.

Algebra	5	Algebra	3
English	5	Geometry	4
General History	3	English	3
Botany	3	Latin	5

Electives.—Carpentering, Agriculture, Practical Mechanics, Freehand Drawing, Stenography.

Students are required to elect one of the courses offered under electives, which their previous training has fitted them to take. While the course of study is graded in two classes, designated as the First and Second Year Preparatory, a mature student may take such studies from both grades as are essential for preparation for the college.

Students desiring special work in *agriculture* or mechanics, who are not prepared to enter the regular courses leading to a degree, may combine with work in the preparatory department such courses in agriculture and mechanics as may fit their especial needs. The successful completion of such a special course will lead to a certificate covering the work completed.

General Information.

Information with regard to the calendar of the school, the cost of living, regulations, etc., may be found on the first twenty-six pages of this catalogue. For other information apply to

M. H. TYLER, *Master*,

KINGSTON, R. I.



TAFT LABORATORY. DAVIS HALL. BOARDING HALL.

The School of Correspondence.

Education by correspondence can never take the place of actual attendance at an educational institution, yet it may afford a stimulus and prove a source of help to the one who pursues it faithfully and earnestly. The School of Correspondence is designed to help those who cannot attend the college classes. Its aim is to assist in a study of the problems which bear directly upon the work of the farm. It does not undertake to outline and carry through a definite course of instruction. The work which it offers is in no sense a substitute for a college education. It does undertake to assist the student to a better understanding of the particular subjects in which he is most directly interested. Owing to the limited funds and time available, the work cannot be extended so far as its usefulness warrants. In some departments other duties prevent giving attention to this work. The plan is to use books which cover the particular field. Questions on these books are forwarded as the work progresses, the replies to which are to be returned and are discussed when necessary. The questions and discussion growing out of the reading and replies are expected to furnish the most valuable part of the work. Work is under way along lines of general agriculture and of fruit-growing.

No fees are exacted, the only expense being for the books used and the postage required in correspondence. Books are obtained at reduced rates from The Orange Judd Company, 52 Lafayette Place, N. Y., upon presentation of the certificate of enrolment.

Address, SCHOOL OF CORRESPONDENCE,
RHODE ISLAND COLLEGE,
KINGSTON, R. I.

The Nature Guard.

The Nature Guard is an organization of young people formed for the purpose of awakening in its members a livelier interest in the things of out-door life. Its primal object is to stimulate observation and to furnish a key to the coyly hidden secrets of nature, while underneath and behind it all is the desire to instil a love of nature and of country life.

The boys and girls in one school, or in one room, if the school is graded, form themselves into a band and elect officers, which are a Spy and a Guardian. Each band fixes its own times of meeting and adopts its own methods of procedure. Enrolment cards, to be signed and returned, are furnished from headquarters. Printed leaflets are mailed monthly during the school-year, and monthly reports giving observations of their own are asked from the members.

The following bands were enrolled during the school-year of 1900–1901:

Agassiz Band, Woonsocket, R. I. Dorothy W. Caldwell, Spy; Frank Kettlety, Guardian.

Bluebird Band, Pine Hill, R. I. Lottie M. Greene, Spy; Anna Kenyon, Guardian.

Bright-eyed Band, Westerly, R. I. Walter Nelson, Spy; Lottie Payne, Guardian.

Buckfield Nature Band, Buckfield, Maine. Harry Turner, Spy; Cleora M. DeCoster, Guardian.

Conanicut Junior Naturalists, Jamestown, R. I.

Family Band, Peru, Maine. Mrs. M. V. Hall, Mother.

Forest Band, Westerly, R. I. Alexander Kenneth, Spy; Louise Hiscox, Guardian.

Four-Leaf Clover Band, Woonsocket, R. I.

Greenwood Band, Providence, R. I. Viola M. Culton, Spy; Maude A. Burton, Guardian.

Harris Avenue Band, Riverpoint, R. I. Ettie Matteson, Spy; Annie Miley, Guardian.

Hiawatha Band, Phenix, R. I. Thomas C. Clowes, Spy; Helena V. Quinlan, Guardian.

Hope Band, Woonsocket, R. I. Edith L. Livingston, Spy; Mabel G. Davidson, Guardian.

Horse Shoe Lake Band, Lovell, Maine. Mrs. Z. McAllister, Mother.

Laurel Band, Blowing Rock, N. C. Robert Lambkins, Spy; Annie Reid, Guardian.

Laurel Lake Band, Kingston, R. I. Mary Northup, Spy; Walter Knowles, Guardian.

Look-About-You Club, Providence, R. I. Edgar Sellew, Spy; Grace Peckham, Guardian.

Marigold Band, Phenix, R. I. Frederick B. Tew, Spy; Alice Magill, Guardian.

Mary Dickerson Band, Providence, R. I. Daniel Hodnett, Spy; Albert Fleckhamer, Guardian.

Mayflower Band, Madison, Conn. Harry N. D. Kelsey, Spy; Clarence Bassett, Guardian.

Meadow Band, Westerly, R. I. LaVerne Stillman, Spy; Mary Utter, Guardian.

Mother Nature's Sons, Westerly, R. I. Joseph Corey, Spy; Sallie E. Coy, Guardian.

Mountain Boomer Band, Blowing Rock, N. C. Clarence Weedon, Spy; Luda Perry, Guardian.

Outlook Band, Providence, R. I. Joseph McCormick, Spy; John Coffey, Guardian.

Pansy Band, Hillsdale, R. I. Arthur L. Cooke, Spy; Sadie Marshall, Guardian.

Pink Band, West Kingston, R. I. Susan L. B. Albro, Spy; Louis A. Worden, Guardian.

Sons of Nature, Woonsocket, R. I. Leland A. Jenckes, Spy; Elton Kettlety, Guardian.

Sunshine Family Band, Buckfield, Maine. Mrs. H. H. Buck, Mother.

Sylvan Band, Sylvania, Pa. George Mosher, Spy; Lena M. Bradford, Guardian.

Washington Band, North Scituate, R. I. Frances R. Page, Spy; Bessie Knowlton, Guardian.

Watchful Band, Peace Dale, R. I. James O'Hara, Spy; Marie Brennan, Guardian.

Waterton Band, Providence, R. I.

Wide Awake Band, Hope, R. I. William H. Jordan, Spy; Nettie Brayton, Guardian.

Wide Awake Band, Phenix, R. I. Leon H. Corey, Spy; Mary A. Canavan, Guardian.

Wide Awake Band, Yantic, Conn. Marion J. Lamb, Spy; Shirley H. Miner, Guardian.

Religious Organizations.

Young Men's Christian Association.

E. J. Crandall ..... President.

R. W. Kent ..... Vice-President.

R. W. Pitkin ..... { Cor. Secretary. / Rec. Secretary.

W. M. Hoxsie ..... Treasurer.

Young Women's Christian Union.

Laura M. Cooke ..... President.

Nellie A. Harrall ..... Vice-President.

S. Elizabeth Champlin ..... Secretary.

Edith S. Rodman ..... Treasurer.

Alumni Association.

Warren B. Madison ..... President.
East Greenwich, R. I.

George A. Rodman ..... Secretary and Treasurer.
Providence, R. I.

*Students.

Graduate Students.

Briggs, Nellie Albertine, B. S., 1901.....Kingston.
George, Lillian Mabelle, B. S., 1899.....Amesbury, Mass.
Steere, Anthony Enoch, B. S., 1900.....Chepachet.
Smith, Howard Dexter, B. S., 1901.....North Scituate.
Wilby, John, B. S., 1901.....Kingston.

Graduates of 1901.

Brayton, Charles Andrew, Agr.....Kingston.
Briggs, Nellie Albertine, Sci.....Kingston.
Burgess, Charles Stuart, Mech.....Providence.
Clarner, Louis George Karl, Jr., Sci.....Arnold's Mills.
Dawley, Edna Ethel, Sci.....Kenyon.
Denico, Arthur Albertus, Sci.....Narragansett Pier.
James, Ruth Hortense, Sci.....Kenyon.
Sherman, Anna Brown, Sci.....Kingston.
Sherman, Elizabeth Agnes, Sci.....West Kingston.
Smith, Howard Dexter, Sci.....North Scituate.
Steere, Roena Hoxsie, Sci.....Providence.
Wilby, John, Sci.....Kingston.

Seniors.

Clarke, Latham, Chem.....West Kingston.
Cornell, Bailey Jordan, Eng.....Croton-on-Hudson, N. Y.

* From January 1, 1901, to January 1, 1902.

Ferry, Oliver Needham, Mech.....Palmer, Mass.
Maxson, Ralph Nelson, Chem.....Westerly.
Pitkin, Robert William, Mech.....Cowesett.
Reynolds, Arthur Leone, El. Eng.....Athol, Mass.

Juniors.

Barber, Kate Grace, Gen. Sci.....Carolina.
Clarner, John Adam, Mech.....Pawtucket.
Cooke, Laura Marion, Gen. Sci.....Narragansett Pier.
Crandall, Elverton Jewett, El. Eng.....Adamsville.
Cross, Frederick Lawrence, El. Eng.....Narragansett Pier.
Duffy, John Edward, Biol.....Riverpoint.
Goddard, Warren, Jr., Mech.....Brockton, Mass.
Hoxsie, Fred Clifford, Biol.....Woodville.
Hoxsie, Willard Munroe, Biol.....Quonochontaug.
Keefer, Edith L., Biol.....Oceanus, N. Y.
Kent, Raymond Warren, Chem.....Woonsocket.
Kenyon, Charles Franklin, El. Eng.....Point Judith.
Loomis, William, Mech.....Glastonbury, Conn.
Peckham, Arthur Noyes, El. Eng.....Kingston.
Quinn, Mary Louise, Biol.....Wakefield.
Rodman, Edith Stoughtenburg, Gen. Sci.....Kingston.
Tefft, Ernest Allen, El. Eng.....Hope Valley.
White, Mabelle Frances, Gen. Sci.....Amesbury, Mass.
Whitmore, Charles Ely, El. Eng.....Holyoke, Mass.

Sophomores.

Alomá, Tiberio Garcia, El. Eng.....Cienfuegos, Cuba.
Ballou, Willard Alger, Biol.....Lawrence, Mass.
Briggs, Myron Watson, El. Eng.....Kingston.
Clancy, John, Agr.....Mystic, Conn.
Rodman, Walter Sheldon, El. Eng.....Wakefield.
Wells, Thomas Perry.....Kingston.

Freshmen.

Bolster, William Arthur.....Valley Falls.
Carley, Frederick James.....Tewksbury, Mass.
Champlin, Sarah Elizabeth.....Kingston.
Clark, Rollin Grover.....Narragansett Pier.
Dow, Victor Wells.....Hartland, Me.
Gilman, Jean.....Gilman, Me.
Harrall, Nellie Armstrong.....Wakefield.
Hoxsie, Katherine Mertie.....Woodville.
MacDonald, James Merton.....Wood River Junction.
Merriam, Beulah Amanda.....Millbury, Mass.
Schofield, James Frederick.....Bristol.

Specials.

Bateman, Ernest.....Peace Dale.
Church, Albert Sumner.....Narragansett Pier.
Cross, John Gardiner.....Narragansett Pier.
Hayes, Elbert Seymour.....Block Island.
Hodges, Mrs. Leonie Rose.....New York, N. Y.
Patterson, Percy Milton.....Providence.
Reynolds, Walter Florus.....Brockton, Mass.
Storey, Frank Hepworth.....Wakefield.
Wilcox, Charles William.....Kingston.

Preparatory School.

Adams, Harry Ernest.....Providence.
*Aldrich, Myron Olney.....Woonsocket.
*Arnold, Benjamin Howard.....East Greenwich.
Bell, Leroy Valentine.....Wakefield.
Brigham, Reuben.....Kingston.
Bristow, John, Jr.....Narragansett Pier.
*Brown, Martha Browning.....Kingston.

* Taking partial work in the College.

*Bryant, Hershey Sneath.....Gardner, Mass.
Bryer, Howard Burton.....Newport.
Bundy, Willard Clifford.....Little Compton.
Calder, John Alexander.....Westerly.
Carbonell, Antonio y Besada.....Trinidad, Cuba.
*Carpenter, Hortense Blakesley.....Kingston.
Clemens, Fred Joseph.....Peace Dale.
Davis, Augustus Boss.....Kingston.
Dawley, Percy William.....Kenyon.
Dixon, Melvin Erastus.....Worcester, Mass.
Donath, Francis Edward.....Pawtucket.
Elkins, Marion Graham.....Amesbury, Mass.
England, Fred Dexter.....Lonsdale.
Fagan, Hugh Jean.....Peace Dale.
Flagg, Caleb Belcher.....Kingston.
Gammon, Fred Battles.....Brockton, Mass.
Gleason, Walter Carpenter.....Providence.
*Grinnell, George Francis.....Narragansett Pier.
*Harding, Lee La Place.....Hamburg, Conn.
Hendrich, Augustus Charles William.....Kingston.
Hevia, Horacio.....Havana, Cuba.
Hubbard, Frank Wilson.....Providence.
Keyes, Frederick George.....Rochester, N. Y.
Macomber, Miner Sanford.....Kingston.
Martin Francisco José.....Cartago, Costa Rica.
Martinez, Rolando.....New York, N. Y.
McCarthy, Charles Henry.....Central Falls.
Mugica, Alfredo.....Havana, Cuba.
*Murray, James Lee.....Narragansett Pier.
Nichols, Howard Martin.....Kenyon.
Northup, John Winchester.....Kingston.
Potter, Mabel Endora.....Wakefield.
Riley, William Edward.....Narragansett Pier.
Sherman, Benjamin Francis.....West Kingston.
Sisson, Cora Edna.....Wickford.

Sisson, Neva Maude.....Wickford.
Slocum, Percy Wilfred.....Kingston.
Smith, Bert Cleveland.....Tarkiln.
Smith, Thomas Albert.....Providence.
Tucker, Ethel Aldrich.....Kingston.
Tucker, Hannah Mahala.....West Kingston.
Urrutia, Carlos.....Comerio, Porto Rico.
Watson, Walter Irving.....Wakefield.
Wilbur, Lester Emerson.....Little Compton.
Williams, Hazel Eugene.....Sylvania, Pa.
Winsor, Sydney Brown.....Greenville.

Specials in Wood-Carving.

Lewis Balch.....Kingston.
Mrs. Charles Brayton.....Kingston.
Mary J. Brown.....Kingston.
Mrs. Fred Clark.....Kingston.
Mrs. A. A. Greenman.....Kingston.
Lillian Rodman.....Kingston.

Course in Farm-Practice.

Buchanan, Charles Stuart Hamilton.....New York, N. Y.
Demary, Jackson.....Charlestown, N. H.
Dilatush, Robert Mortimer.....Robbinsville, N. Y.
Gage, Isaac Bradlee, A. B.....West Medford, Mass.
Gardner, Fred Foster.....Haverhill, Mass.
Handy, Robert Sylvan.....Cataumet, Mass.
Peckham, William Albert.....Little Compton.
White, Ernest Lambert.....Somerville, Mass.

Poultry School.

Adams, Robert Ernest.....Briarcliffe Manor, N. Y.
Aldrich, Stuart Morgan.....Providence.
Allen, John.....South Westport, Mass.

Arnold, Louis Valentine.....Prudence Island.
Barton, Benjamin.....Kingston.
Bennett, Burtis Adelbert.....Ludlow, Mass.
Benson, Harry Elmer.....Dorchester, Mass.
Burgess, John.....Hope Valley.
Caswell, John.....Wakefield.
Crandall, Almond.....Winfield, N. Y.
Dennis, Thomas Ezra.....Bovina Centre, N. Y.
Dunham, John Edgar.....West Springfield, Mass.
Estabrook, Frank Leslie.....Athens, Pa.
Figge, Charles Frederick.....Hempstead, N. Y.
Graham, Frederick Seeley.....Washington, Pa.
Gudge, Benjamin Joseph.....White City, Kans.
Hemingway, Thomas.....Glenview, Chicago, Ill.
Hemingway, Mrs. Thomas.....Glenview, Chicago, Ill.
Jacques, Mrs. Sarah Eleanor.....Porter, Mass.
McLaine, John Harold.....Fordham, N. Y.
McMillan, Charles Wallace.....Barre, Vt.
McMorrow, Thomas Patrick.....Dorchester, Mass.
Milliken, Edward Norris.....New Bedford, Mass.
Peterman, William Henry.....Kipple Post Office, Pa.
Quigley, Michael Francis.....Port Richmond, N. Y.
Richardson, Harry Putnam.....Durham, N. H.
Rush, William Thomas.....Toronto, Canada.
Sheldon, Herbert Pierpont.....Livonia, N. Y.
Stoneburn, Frederick H.....Morristown, N. Y.
Stroh, Amos Harry.....Christopher, Pa.
Wilson, William Lorenzo.....Philadelphia, Pa.

Total, counting none twice.....163.

Graduates.

1894.

Adams, George Edward, Agr. ..... Kingston.
Assistant in Charge of Field Experiments, R. I. Agr. Experiment Station.

Ammonds, George Clarence, Mech. ..... Kingston.
Railroad Mail Clerk on N. Y., N. H. & H. R. R.

Arnold, Chapin Trafford, Agr. ..... Providence.
Electrician, Office, 107 Westminster St., Providence.

Burlingame, George Washington, Agr. ..... Chepachet.
Teacher and Poultryman.

Clark, Helen May, B. L., Smith College, 1899,
118 Lawrence St., Brooklyn, N. Y.
Y. W. C. A. Settlement Worker, Willoughby House.

Knowles, John Franklin, Mech. ..... Kingston.
Assistant, Wood-Working Dept., R. I. C. A. & M. A.

Madison, Warren Brown, Agr. ..... East Greenwich.
Gardener and Florist.

Mathewson, Ernest Hoxsie, Mech., Ph. B., Brown University, 1896,
Tariffville, Connecticut.
In Charge of Experiments under Division of Soils, Department of Agriculture.

Peckham, Reuben Wallace, Agr. .... Melville Station, Middletown.
Market Gardener.

Rathbun, William Sherman, Agr. ..... Wakefield.
Practicing Veterinary.

Rodman, George Albert, Mech.....Providence.
Assistant, Bridge Dept., N. Y., N. H. & H. R. R. Co.

Sargent, Charles Lawrence, Agr., Ph. D., 1900,
University of Pennsylvania, Newark, New Jersey.
Chemist, Murphy Varnish Co.

Slocum, Samuel Watson, Agr.....130 West Broad St., Westerly.
Carpenter.

Spears, John Barden, Agr.....Foster Centre.
Farmer.

Sweet, Stephen Adelbert, Agr.....Slocums.
Farmer.

Tucker, George Mason, Agr., Ph. D.,
Göttingen, Germany, 1899. Ojitlan, Mexico.
Manager, Coffee and Rubber Plantation.

Wilber, Robert Arthur, Mech.....East Greenwich.
Express Agent.

1895.

Albro, Lester Franklin, Agr.....Middletown.
Student in Singing.

Burdick, Howland, Agr.....Kingston.
Farm Superintendent, R. I. C. A. & M. A.

Clarke, Charles Sherman, Mech.....Jamestown.
Chief Engineer, Newport and Jamestown Ferryboat Co.

Eldred, Mabel Dewitt.....Kingston.
Instructor in Drawing, R. I. C. A. & M. A.

Hammond, John Edward, Agr.....Jamestown.
Farmer.

Oatley, Lincoln Nathan, Mech.....Wakefield.
Carpenter and Contractor.

Scott, Arthur Curtis, Mech.....Kingston.
Professor of Physics, R. I. C. A. & M. A.

Tefft, Jesse Cottrell, Mech.....Jamestown.
Purser, Newport and Jamestown Ferryboat Co.

Winsor, Byron Edgar, Mech.....Summit.
Poultryman.

1896.

Brown, May (Mrs. Charles A. White).....Narragansett Pier.

Greenman, Adelaide Maria, Graduate, School of Expression, 1899, 19 Mt. Vernon St., Newport.
Teacher of Expression.

Kenyon, Albert Lewis, Mech.....59 Camp St., Providence.
Printer, Silver Spring Bleaching and Dyeing Co.

Moore, Nathan Lewis Cass, Agr.....Mystic, Connecticut.
Railroad Mail Clerk on N. Y., N. H. & H. R. R.

Tabor, Edgar Francis, Mech.....18 Balaklava St., Providence.
Printer, Silver Spring Bleaching and Dyeing Co.

Williams, James Emerson, Agr.....Summit.
Farmer and Grain Dealer.

1897.

Carmichael, Welcome Sands, Sci.....194 Broadway, Providence.
Bookkeeper, Belcher & Loomis Hardware Co.

Case, Herbert Edwards Brown, Mech., Ph. B., Brown University, 1900.....Hartford, Conn.
Student, Hartford Theological Seminary.

Grinnell, Archie Franklin, Mech., 460 Chalkstone Ave., Providence.
Draughtsman, Brown & Sharpe Mfg. Co.

Hanson, Gertrude Maie, Sci.....Peace Dale.

Hoxsie, Bessie Bailey (Mrs. E. F. Rueckert),
80 Atlantic Avenue, Providence.

Larkin, Jessie Louise, Sci.....98 Beach St., Westerly.
Stenographer.

Kenyon, Charles Franklin, Mech.....Shannock.
In Woolen Mills of E. Kenyon & Son, Kenyon.

Kenyon, Albert Prentice, Mech.....Ashaway.
Bookkeeper, Maxson & Co., Westerly.

Marsland, Louis Herbert, Mech.....Cincinnati, Ohio.
Instructor in Mathematics, Ohio Military Institute.

Tefft, Eliza Alice, Sci.....Allenton.
Teacher.

Thomas, Irving, Mech.....Centreville.
Designer of Patterns.

1898.

Arnold, Sarah Estelle, Sci. (Mrs. R. O. Brooks).....Princeton, N. J.

Barber, George Washington, Agr.....Shannock.
Clerk.

Cargill, Edna Maria, Sci.....Abbott Run.
Student, Chandler Normal Shorthand School, Boston, Mass.

Case, John Peter, Agr.....Cleveland, Ohio.
With Brown Hoisting and Machinery Co.

Clarke, William Case, Sci.....Wakefield.
Secretary, Sea View Electric Railroad.

Congdon, Henry Augustus, Mech.....Kingston.
Farmer.

Flagg, Martha Rebecca, Sci.....Kingston.

Harley, William Ferguson, Agr., 561 Pawtucket Ave., Pawtucket.
Salesman, Boston Store, Providence.

Turner, Harriette Florence, Sci., Graduate Drexel Institute, 1900, Florence, Mass.

Director, Domestic Science Dept., Hill Industrial School.

Wilson, Grace Ellen, Sci. (Mrs. Wm. F. Harley), 561 Pawtucket Ave., Pawtucket.

1899.

Bosworth, Alfred Willson, Sci ....Kingston.

Assistant Chemist, R. I. Agr. Experiment Station.

Brooks, Ralph Ordway, Sci.....Princeton, N. J.

Chemist, Laboratory of Hygiene.

George, Lillian Mabelle, Sci..... ....Kingston.

Librarian, R. I. C. A. & M. A.

Harvey, Mildred Wayne, Sci.....Ithaca, N. Y.

Stenographer, Cornell Incubator Mfg. Co.

Kenyon, Blydon Ellery, Agr.....Kingston.

Engineer, R. I. C. A. & M. A.

Knowles, Carroll, Mech.....Kingston.

Assistant in Mechanics, R. I. C. A. & M. A.

Knowles, Harry, Sci..... .....Boston, Mass.

Instructor in Mathematics, American School of Correspondence.

Ladd, Merrill Augustus, Mech...U. S. Army Transport "Buford."

Chief Electrician.

Morrison, Clifford Brewster, Sci.....543 Broad St., Providence.

Chemist, City Sewerage Dept.

Owen, William Frazier, Mech.....Schenectady, N. Y.

Clerk, Data Dept., General Electric Co.

Payne, Ebenezer, Sci.....Ann Arbor, Mich.

Student, Medical School of the University of Michigan.

Phillips, Walter Clark, Mech.....Lafayette.
Student, Brown University.

Reynolds, Robert Spink, Mech.....New Haven, Conn.
Draughtsman, Bridge Dept., N. Y., N. H. & H. R. R. Co.

Rice, Minnie Elizabeth, Sci.....Wickford.
Teacher.

Sherman, Abbie Gertrude, Sci. (Mrs. B. Barton).....Kingston.
Sherman, George Albert, Mech...554 Massachusetts Ave., Boston.
Insurance Agent.

Thompson, Sally Rodman, Sci.....Wakefield.

1900.

Brightman, Henry Maxson, Mech.....Buffalo, N. Y.
With Buffalo Forge and Blower Co.

Cross, Charles Clark, Mech.....Providence.
Foreman Oil-Annealing Furnaces, Nicholson File Co.

Eldred, John Raleigh, Mech....1140 Westminster St., Providence.
With Nicholson File Co.

Fison, Gertrude Sarah, Sci.....Northampton, Mass.
Assistant Librarian, Forbes Library.

Fry, John Joseph, Mech.....East Greenwich.
Principal, Grammar School.

Goddard, Edith, Sci.....Brockton, Mass.
Student, Bridgewater Normal School.

Kenyon, Amos Langworthy, Agr.....Alton.
Farmer.

Munro, Arthur Earle, Sci.....Quonochontaug.
Student, Brown University.

Soule, Ralph Nelson, Sci.....East Greenwich.
Electrician.

Steere, Anthony Enoch, Mech.....Kingston.
Graduate Student, R. I. C. A. & M. A.

Stillman, Lenora Estelle, Sci.....Jamaica, N. Y.
Student, Jamaica Normal School.

Tucker, Bertha Douglass, Sci.....Swansea Centre, Mass.
Dressmaker.

Wheeler, Charles Noyes, Sci.....Westerly.
With Providence Telephone Co.

Wilson, Joseph Robert, Mech.....Belleville.
In Woolen Mills, J. P. Campbell.

1901.

Brayton, Charles Andrew, Agr.....Fiskeville.
Engineer.

Briggs, Nellie Albertine, Sci.....Kingston.
Graduate Student, R. I. C. A. & M. A.

Burgess, Charles Stuart, Mech.....264 Sayles St., Providence.
Draughtsman, Brown & Sharpe Mfg. Co.

Clarner, Louis George Karl, Jr., Sci.....Providence.
Chemical Dept., Silver Spring Bleaching and Dyeing Co.

Dawley, Edna Ethel, Sci.....Kenyon.
Teacher.

Denico, Arthur Albertus, Sci.....Narragansett Pier.
Student, Brown University.

James, Ruth Hortense, Sci.....Kenyon.
Teacher.

Sherman, Anna Brown, Sci.....Kingston.
Stenographer.

Sherman, Elizabeth Agnes, Sci.....West Kingston.
Teacher.

Smith, Howard Dexter, Sci.....Kingston.
Graduate Student, R. I. C. A. & M. A.

Steere, Roena Hoxsie, Sci.....98 Fifield St., Providence.
Stenographer.

Wilby, John, Sci.....Kingston.
Graduate Student, R. I. C. A. & M. A.

Treasurer's Report.

MELVILLE BULL, *Treasurer, in account with the* RHODE ISLAND COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

1901.	Dr.	
Jan. 1.	To cash balance on hand	$1,802 27
	1862 Fund, in hands of State treasurer	4,011 26
	J. H. Washburn, president, for students' board, etc.	14,335 40
	Cash received from incidentals	585 30
	Cash received from interest	28 43
		$20,762 66

1901.	Cr.	
	By salaries	$2,659 35
	Postage, stationery and printing	143 50
	Freight and express	605 53
	Traveling	239 94
	Tools and machinery	150 37
	Labor	5,734 96
	Store	807 49
	Furniture	544 80
	Coal, wood, gasoline, grain, etc.	1,964 33
	Construction and repairs	1,440 78
	Provisions	2,127 43
	Boarding expense	1,438 24
	Balance	2,905 94
		$20,762 66

THIS IS TO CERTIFY that the undersigned, auditing committee of the Board of Managers of the Rhode Island College of Agriculture and Me-

chanic Arts, have examined the accounts of Melville Bull, treasurer, as above, and find the same to be correct, leaving a balance in the said treasurer's hands of two thousand nine hundred and five dollars and ninety-four cents ($2,905.94).

J. V. B. WATSON,
Auditing Committee.

MELVILL BULL, *Treasurer, in account with the* RHODE ISLAND AGRICULTURAL EXPERIMENT STATION.

1901.	DR.	
	To balance from last year	$172 68
	Station receipts	568 45
	Interest	36 28
		$777 41

1901.	CR.	
	By salaries	$88 33
	Labor	328 06
	Postage and stationery	5 60
	Freight and express	91 13
	Heat, light and water	5 75
	Seeds, plants, and sundry supplies	51 86
	Feeding-stuffs	38 57
	Library	2 40
	Tools, implements and machinery	50
	Furniture and fixtures	13 04
	Live stock	1 35
	Traveling expenses	2 32
	Contingent expenses	1 00
	Building and repairs	5 24
	Balance	224 26
		$777 41

THIS CERTIFIES that the undersigned, auditing committee of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, have examined the accounts of Melville Bull, treasurer of the Agricultural Experiment Station, and the vouchers corresponding therewith, for the year ending June 30th, 1901, and find the same correct.

The total receipts are $777.41, and the total expenditures are $553.15, thus leaving a balance to new account of $224.26.

J. V. B. WATSON,
J. H. WASHBURN,
Auditors.

THE RHODE ISLAND STATE AGRICULTURAL EXPERIMENT STATION *in account with the* UNITED STATES APPROPRIATION.

1901.	DR.	
	To receipts from the Treasurer of the United States as per appropriation for fiscal year ending June 30, 1901, as per act of congress approved March 2, 1887	$15,000 00

1901.	CR.		
	By salaries	$8,876 93	
	Labor	2,788 15	
	Publications	40 74	
	Postage and stationery	220 48	
	Freight and express	161 37	
	Heat, light, and water	320 57	
	Chemical supplies	90 81	
	Seeds, plants, and sundry supplies	531 91	
	Fertilizers	180 87	
	Feeding stuffs	479 94	
	Library	499 62	
	Tools, implements, and machinery	106 95	
	Furniture and fixtures	39 37	
	Scientific apparatus	209 31	
	Live stock	44 70	
	Traveling expenses	268 33	
	Contingent expenses	19 31	
	Buildings and repairs	120 64	
			$15,000 00

We, the undersigned, duly appointed auditors of the corporation, do hereby certify that we have examined the books and accounts of the Rhode Island State Agricultural Experiment Station for the fiscal year ending

June 30, 1901; that we have found the same well kept and classified as above, and that the receipts for the year from the Treasurer of the United States are shown to have been $15,000.00, and the corresponding disbursement $15,000.00; for all of which proper vouchers are on file and have been by us examined and found correct, thus leaving no balance.

And we further certify that the expenditures have been solely for the purposes set forth in the act of congress approved March 2, 1887.

J. V. B. WATSON,
J. H. WASHBURN,
Auditors.

Synopsis of the Report of the Treasurer of the Rhode Island College of Agriculture and Mechanic Arts to the Secretary of Agriculture and the Secretary of the Interior, of amount received under Act of Congress of August 30, 1890, in aid of Colleges of Agriculture and the Mechanic Arts, and of the disbursements thereof, to and including June 30, 1901:—

Balance on hand July 1, 1900	
Date of receipt of installment for 1900-01, July 11th, 1900	$25,000 00
	$25,000 00

DISBURSEMENTS THEREOF FOR AND DURING THE YEAR ENDING JUNE 30, 1901:

SCHEDULE A.—Disbursements for Instruction in Agriculture and for facilities for such instruction	$3,613 30
SCHEDULE B.—Disbursements for Instruction in the Mechanic Arts and for facilities for such instruction	5,738 04
SCHEDULE C.—Disbursements for Instruction in English language and for facilities for such instruction	2,266 99
SCHEDULE D.—Disbursements for Instruction in Mathematical Science and for facilities for such instruction	2,656 10
SCHEDULE E.—Disbursements for Instruction in Natural Science and for facilities for such instruction	10,013 78

SCHEDULE F.—Disbursements for Instruction in Economic Science and for facilities for such instruction	711 19	
Total expended during the year		$24,999 40
Balance remaining unexpended July 1, 1901		60
		$25,000 00

I HEREBY CERTIFY that the above account is correct and true, and, together with the schedules hereunto attached, truly represents the details of expenditures for the period and by the institution named; and that said expenditures were applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction.

MELVILLE BULL, *Treasurer.*

ITEMIZED EXPENDITURES OF THE $15,000.00 (HATCH FUND FOR AGRICULTURAL EXPERIMENTS) WILL BE FOUND IN THE AGRICULTURAL EXPERIMENT STATION REPORT.